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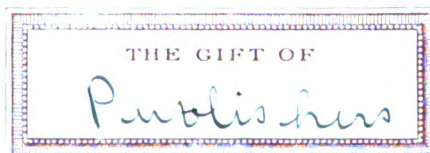
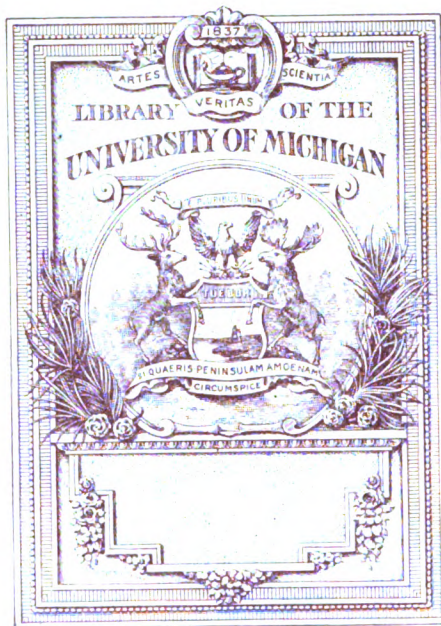
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THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 313.
New Series Vol. XIV, No. 184.

New Albany, Ind., January, 1907.

\$1.00 PER ANNUM.
SINGLE COPIES, 20 Cts.

ORIGINAL.

SURGICAL SPECTERS.

By M. R. Barker, M. S., M. D., Chicago.

Many of the formerly accepted ideas and methods of treating disease and abnormal conditions have been supplanted by more scientific procedures, or made less excruciating by measures more humane. The old method of blood letting in diseased conditions would not now be tolerated, only exceptionally; while only a few decades ago, in the memory of many now living, it occupied a foremost position as a curative procedure.

The advent of anesthesia as an adjunct in surgery has robbed these procedures of their horrors and made accessible diseased processes in parts of the human system, which, under the old regimes were impossible. The establishment of the germ theory as a fact has so modified the treatment of many conditions, that the old and the new have no semblance to each other.

Surgery stands as an exponent of the law of the "survival of the fittest," a strict appreciation of which in the treatment of diseased processes, under the searchlight of greater and more perfect scientific attainment, has caused old and established procedures to crumble and fall. They have been discarded because they were not the fittest, because modern research has found them wanting, and has provided a better way. The internist who would now treat diphtheria with iron, potash, or sprays would be mobbed by a righteously indignant populace. The surgeon who would now treat appendicitis as inflammation of the bowels, as it was treated by our fathers in surgery for centuries, would soon be shorn of any surgical laurels he might possess. While he who would cover all the evils arising from diseased conditions of the gall-bladder and ducts by the sweeping term, gastralgia, and treat them accordingly, would soon be invited to a back seat.

A retrospection in things surgical may sometimes be profitable. What has become of the methods of our predecessors in surgery? We do not refer to the fads that are omni-

present, having mushroom growths and early deaths, but to the established methods of the past masters in our art. Some of them are still extant in a modified form, but the great majority of them are occupying positions upon side tracks of the surgical highway; their principal interest to us being, they mark the places where old and faulty methods ceased to be used, and the commencing of newer and better methods. They are also silent reminders that the methods now in vogue must give way to those that are better, and take their places beside the way, as mute markers of new and better things.

These silent specters along the way do not cause grief, but on the contrary, are subjects of congratulation, because they speak in no uncertain sound of progress. They are evidence that the surgical mind is active. They demonstrate that life and energy are the characteristics of that body of which every true surgeon is a part. These silent specters along the way impart to the progressive, hopeful surgeon new energy, because they impress the fact that surgery is accomplishing things.

As we pass these specters in review from remote times to the present, we are again impressed, and elated, because of the fact, that we discover in these forsaken methods a constant turning from unreason toward reason, and from the unscientific toward the scientific.

While these changes for many decades were not rapid, or well marked, yet it is recognizable in them that a struggle for better methods is going on. But when we separate the primitive methods of surgeons in the first century of surgical practice, by the centuries that have intervened from then till now, the changes that have been wrought are overwhelming. We also find it a subject for congratulation that in the beginning a hundred years separated one specter from another, illustrating in the most impressive manner either the sluggishness or apathy of the scientific mind in surgical things at that time. It shows that there was not that deep interest that begets thought, that in turn develops new and better methods. It also shows the disposition of one generation of surgical workers, to accept that which they inherited from their predecessors with-

out question, or without a thought that these methods could be improved. It illustrates a surgical age in which scepticism had no part; hence improvement no place. Contrast the first century in surgery with the last. In the former, decades measured the distance between the changes in methods; hence the specters along the surgical way at this time are far between; while in the last century, the way is literally strewn with them, each bearing mute but eloquent evidence to the fact, that scientific research is producing scientific methods in a degree never before known in the history of surgery. It is likely that no future century will be credited with greater surgical activities than the last has been. There is a reason for this. Surgery up to within the present century could not make great progress because every effort it made was thwarted by sepsis. It was evident to the surgical mind that scores of operations could be performed upon different organs of the body if sepsis could be eliminated. Sepsis was the bulwark behind which diseased processes became organized, developed, and wrought destruction, while surgeons, comprehending all, were powerless to achieve. They could devise methods for doing things, but could not do them. When Sir Joseph Lister discovered a method by which surgical procedures could be executed and sepsis eliminated from the process, the way was at once opened for the execution of operations that had long been planned; hence, the later part of this century has been credited with much work, the planning for which was before executed, though some of the methods were crude and have been modified. When the dam breaks that holds the waters in check, the floods are rampant for a time. Sepsis was the dam across the surgical current, and when it was broken, the pent-up energies of the surgical world were liberated; scores of methods that had been devised were now successfully executed. Old methods were abandoned. Hence the surgical highways during the last half of the last century are literally strewn with the specters of abandoned surgical methods.

The work we successfully accomplish to-day by one method, is more successfully done to-morrow by another method. The surgical works that are written this year must be revised next year or they are valueless. The surgeon's library, bursting with volumes from the pens of past masters in our art, are valueless, save the few volumes just added. The surgeon of to-day must not only possess the usual five senses, but he must develop a sixth sense. We will term this the literary sense. He must be able to grasp and appropriate in the shortest possible time, the writings and sayings of his colleagues. In other words, he must glean from the surgical field all that is said and

written without reading it. Instead of spending hours upon some paper he must by his literary sense glean all that is in it in so many minutes. The surgeon of to-day is in some respects like the man at the bat in a baseball game; he must let little go by him, or he will soon be retired.

While it is a matter of astonishment that so many and frequent changes in surgical methods have taken place in so short a time, and are still taking place, it perhaps is a matter of as great surprise, that some acknowledged inefficient methods still are in use. In other words, all inefficient and vicious surgical methods have not yet become specters by the surgical wayside. Paramount among which we may mention the catheter method in the treatment of hypertrophy of the prostate. I believe it is true, that there is no surgical method in use for any diseased or abnormal condition, that in itself is so obnoxious and offensive, and the results of which so invariably end in disaster. A method void of all curative elements, only at best a palliative measure, and when once commenced is never abandoned until such havoc has been wrought by it that its victim is a subject of commiseration. The continuation of this old and vicious method is due to three causes; the first of which is the difficulty that always maintains when an effort is made to impress the general profession with the fact that better methods than the one they are using exist. This is not because of a stubborn determination to stick to the old under any circumstances, but because of incredulity. They have used the old for years and while not satisfied, do not readily abandon it; in fact, they become apathetic.

The patients who are troubled with hypertrophied prostates have as a rule passed the zenith of their terrestrial activities, and begin to count the years they have to live, and conclude the old offensive catheter, the aroma of which to them is pleasant, but to others most obnoxious both to vision and olfactories, has served their purpose for a long time, and as long as it can be pushed into the bladder and the vitiated urine flow through it, they will not abandon it for any operation, the outcome of which to them seems uncertain. Third, this old catheter method has been retained thus long because of the fact that until within the last decade surgeons have not been able to offer a satisfactory substitute for it. It is true that a mighty effort has been going on in the surgical world, to evolve a method by which these old sufferers could be safely and satisfactorily relieved from prostaticism, or the urinary trouble produced by hypertrophy of the prostate, but a satisfactory method was not evolved until so recently that there has not been time to educate the general profession regarding it, much less the laity.

For these three reasons principally the offensive, uncleanly old method still holds a vanishing place among surgical procedures.

As before stated, it is almost a universal rule, that when the prostatic commences the use of the catheter he will not abandon it until he has done himself great injury. It does not matter how careful he may be in its use, disastrous results are inevitable. Sooner or later infection of the bladder, extending to the ureter, and to the pelvis of the kidney, will follow.

There is but one way to avoid these unhappy consequences and that is never prescribe the catheter in these cases. When the prostate becomes hypertrophied it is a universal rule that the trouble will continue, it does not tend to recovery; hence the urinary troubles that are caused by it grow worse instead of better. We understand that the condition may be interrupted for a time, but it does not stop. Where is the reason then in prescribing a method of treatment that is never curative and always ends in disaster, and this is fully understood when the treatment is inaugurated. If the patient is unwilling, or unable, for any reason to have the prostate removed by prostatectomy, which, at first, or when the patient is first disturbed by the condition, is a benign operation, instead of putting into his hands a catheter and teaching him its use, use other methods to empty the bladder, that are entirely harmless, until the time when he is ready to have the gland removed. Prominent among which we may mention massage of the prostate through the rectum. If this procedure is carefully and persistently pursued and persevered in, relief will follow in almost all cases for a certain length of time. Sometimes these patients may be safely carried over for a year or two, and sometimes even longer, by this method. We understand full well that by this treatment we are liable to lose our patient, for some interested neighbor or busybody, who is using a catheter, or knows something about it, will enlighten our patient, and the first thing we know we have been supplanted in the case by the catheter. To avoid this as much as possible, I always enlighten my patients concerning the dangers of the catheter, and give them the reasons for not using it. Even this, however, does not always prevent its use. But it always keeps my record clear, which is of value to me, if not to the patient.

The removal of the prostate, in and of itself, is a benign operation. It becomes serious only when the genito-urinary organs become infected by the use of the catheter, and the patient is a total wreck when the work is done. After the patient has suffered for years with prostatism, and his health is undermined by this and concomitant conditions produced by catheter use, is not the

time to discard the method. It has done about all the damage it can do. To discontinue it now is like putting rotten eggs in cold storage to keep them from spoiling.

We do not wish to be understood from this that we would favor the continuation of the catheter, even at this time. Stop the use of the obnoxious old method at any stage of the disease. But we say that this is not the best time to stop it. The rule should be never commence its use. When this rule is adopted, and the old catheter method of treating hypertrophy of the prostate becomes a specter by the surgical wayside the prostatic may rejoice in the fact that even his condition is curable by benign surgical methods.

Some surgeons, who are perfectly well aware of the viciousness of the catheter method, in a half-hearted manner advocate its use in selected cases, this class being the cleanly, intelligent, well-to-do, the reason for this selection being, that such persons have the time, and the intelligence, to keep the catheter clean and use it in a cleanly way. And as he has means and does not have to struggle for an existence, he can get along very well with the catheter method. If this were the rule, cleanliness, intelligence, and a competency, would be deplorable in prosthetics. It is presumed by those who advocate this doctrine that such individuals may use such precautions with the method, as to escape its evil effects, which those less fortunately situated are unable to do. The facts are the catheter method is not a respecter of persons or conditions, and every one who uses it, sooner or later becomes infected by it. An immunity from infection could not be granted to users of the catheter if the most rigid antiseptic precautions were observed every moment during catheter life. A perfectly clean catheter will carry pathogenic germs into the bladder as readily as a dirty one if the germs are in the urethra, and we all know that this organ is the habitat of many of these germs; especially is this true when, for a time, the reaction of the urine becomes neutral or alkaline, which may occur at any time. Cleanliness, good treating and a plenty of money will not keep the urethra sterile; hence, can not protect this class of prosthetics from the evils of catheter life. There is but one way to escape the vicious effects of catheter life, and that is never commence it.

WATER CURE

By D. L. Field, M. D., Jeffersonville, Ind.

The remedial or therapeutic properties of water, at various temperatures, may be applied as antiphlogistic and refrigerant, tonic, sedative, antispasmodic, anodyne, anesthetic, styptic, dissolvent, eliminant, laxative, catenotic, derivative, and alterative.

When applied at a temperature less than that of the body, water lessens the production of heat, and also abstracts it by conduction. No other agency will so readily, so easily, so certainly, bring down the temperature of a fever, diminish the pulse, and ameliorate all the symptoms depending upon exaggeration of vital activities, as this.

Water may also be used in such a way as to increase the rapidity of the circulation, and the temperature very quickly and powerfully. The hot bath is a most efficient stimulant in the true sense of the word. It will so excite the circulation as to increase the pulse from seventy to one hundred and fifty in fifteen minutes. The tonic effects of a short, cool bath are well appreciated by all who have enjoyed it. Cold water lowers temperature without any unpleasant after effects, and few of the immediate dangers from some medicines used for such purposes. The effects of the local application of cold or hot water, in relieving pain, are well known. In many other modes of application, it is also effective in a high degree, in relieving nervous irritability.

Hot water is used successfully to arrest oozing from capillaries and bleeding from small vessels..

The power of water to secure the dispersion of some glandular enlargements and articular swellings is well recognized. As water is a perfect solvent of various excrementitious substances, the result of tissue waste, it is, therefore, a powerful eliminative agent. It is a diaphoretic, a diuretic, a hydragogue, a cholagogue, and in some cases, an expectorant.

Used copiously internally, it will be found, in many cases to do away with purgatives.

For a long time mercury has been regarded as the champion alterative, but it may yield to water, however, as it accelerates and increases construction in even greater proportion according to experiments.

The works of the oldest medical authors contain numerous references to the bath, and testify to good effects in the treatment of many diseases.

Hippocrates made great use of copious draughts of water in the treatment of disease. Two thousand years ago Galen and Celsus pronounced water to be one of the essentials in sickness, and if the physicians of a half century ago had used cold water internally and externally they would have refreshed the languishing patients, instead of leaving them to be consumed by pent-up fires, which parched the lips, disorganized their blood, and finally ended their sufferings with their lives.

At the present day, the utility of water is a well-recognized fact, and it is now prescribed for many diseased conditions.

The late Dr. Flint once said: "The relation of my experience in the use of water

will, of necessity, be stated in a few words, as my employment of the remedy has heretofore been much more limited than it will be in the future, if my life is spared." He then related some very interesting cases, in which he had employed water as the chief remedy, with most excellent results. He also took occasion to recommend as one of the best means of applying water in fevers, the wet sheet pack. He had used the continued cold pack in a number of cases of sunstroke at the Bellevue Hospital, with marked success. He also related a case of acute nephritis, in which the patient exhibited pronounced uremia, whose life was saved by the hot water pack, and the copious use of water as a beverage.

A fomentation over the stomach is a most excellent means of relieving slow digestion and when applied to the bowels stimulates the activity. By means of freezing, parts may be rendered wholly insensible to pain, so that slight surgical operations may be painlessly performed. By this means warts, wens, polypi, fibrous and sebaceous tumors, and even some malignant growths, can be removed.

In fevers there is a point beyond which the rise in temperature is such as to cause an arrest of glandular secretion, as well as extensive destruction of tissue, if allowed to persist. The point at which these changes occur differs in each kind of fever. In scarlet fever, 105 degrees; typhoid, 106 degrees; and in erysipelas higher yet. The use of cold water should be freely applied and persevered in till the temperature falls below the danger point.

DIFFICULTIES OF DIAGNOSIS OF DISEASE LOCATED IN THE EPIGASTRIC REGION.

By Wlaler Courtney, M. D., Brainerd, Minn.*

In the limited time at our disposal for the discussion of this subject, it will be necessary to generalize to some extent instead of attempting in detail the differential diagnosis of the many pathological conditions that exist, or have neighborhood, in the region of the epigastrium. We have here an area, which might be covered by the palm of the hand, that can furnish as many, or more, pathological conditions as any one of similar size in the human body. And the many and diverse manifestations of disease, commonly occurring in this field, may be further augmented to almost bewildering proportions by sympathetically referred pain and tenderness.

While both the internist and the surgeon, who have kept pace with the times, have added to their armamentarium a new and

* Read before the N. D. Med. Association.

brilliant array of etiologic and diagnostic facts, and surgical diagnosis, now works with increased precision, yet in the epigastric region, there are still many bars to correct interpretation of symptoms. It is our aim to briefly treat from a practical diagnostic standpoint, the difficulties in diagnosis of some of the more important conditions in this locality, which have come under our observation, in routine hospital and private work.

Elaborate tables of differential diagnosis, carefully written out, are usually of little value in the practical diagnosis of the many and varied pathological conditions, which are found in this region, and those typical cases with the beautifully arranged columns of symptoms, as pictured in our works of reference, in actual practice are not often observed.

The gall bladder and ducts, liver, right kidney, pancreas, stomach, duodenum, small intestines, appendix, colon, mesentery, omentum, lung and pleura, are either present in, or they encroach upon, the epigastric region, and must all be considered in making a diagnosis, and this diagnosis in many cases will not be based upon typical set of symptoms. For example, a patient gives a history of occasional dull pain in the epigastric region, of long duration, perhaps years,—he may have had an occasional attack of vomiting, but no other symptoms. On deep palpation an area of tenderness is present in the angle between the right rectus muscle and the arch of the ribs. In an obscure case like this, one must consider many things, and a diagnosis by exclusion is the only one at which we may arrive. It may be an old appendicitis with a peri-coelitis, duodenal or gastric ulcer, cholecystitis, cholelithiasis, floating kidney, a chronic gastritis, a neoplasm, or one of a host of other less common conditions, all of which must be taken into account in making our diagnosis by exclusion. To illustrate with a few cases taken from our series: The first case is that of a man, who presented the following symptoms: A history, for many years of recurring attacks of pain, colicky in nature, located in the epigastric and right hypochondriac regions. These attacks of pain were not associated with either ingestion of food or an empty stomach, but they would come on more often after exertion than at other times. Riding would induce an attack of severe epigastric pain. Physical examination revealed considerable tenderness in the angle between the right rectus and the ribs. The diagnosis seemed to rest between biliary colic and gastric or duodenal ulcer, as we could apparently bar out other conditions, such as appendicitis, floating kidney, pancreatitis, and the many other diseases which must be considered. However, examination of the stomach contents

seemed to exclude gastric ulcer, as there was a very low percentage of free hydrochloric acid. the diagnosis of cholecystitis, cholelithiasis or a possible duodenal ulcer was made. Upon operation an indurated mass, about three centimeters by two and one-half centimeters, was found upon the lesser curvature of the stomach, nearly midway between the pylorus and the cardiac orifice. This was excised and upon macroscopic examination proved to be a typical, round, gastric ulcer. On account of the patient's age and the local hyperplasia, some doubt existed as to incipient malignancy, which, fortunately, was dispelled by the microscopic findings. This case furnishes a beautiful example of the subject of our paper, and it also illustrates the marked discrepancy which exists between the typical array of symptoms we are accustomed to expect, and the actual findings.

It has been seldom indeed that our cases of gastric ulcer have presented typical symptoms, either subjective or objective. Particularly has this been true in our laboratory analyses. In only one of our cases this year, has the percentage of free hydrochloric acid been at all high. In two others, it was entirely absent.

In two quite recent cases, the somewhat indefinite value of previous symptoms, indicative of duodenal ulcer, were positively confirmed by the evacuation of several tarry stools after admission to the hospital. A very recent case, however, failed to yield any positive symptoms, except delayed epigastric distress, following the ingestion of food. This having persisted for more than a year, surgical relief was offered and accepted, and an ulcer was demonstrated on the antero-internal wall, about one and one-half inches below the pylorus. Weber's modification of the Boas' test failed to show the presence of occult blood in the stools in this case.

Malignant disease of the stomach, in its incipient stages, has, in our experience, been one of the most difficult of the more common conditions in this region, to diagnose correctly. It is true that after the disease has progressed to the point where there is perceptible emaciation, a typical picture is formed "that he who runs may read." But in order to benefit our patients, diagnosis must be made in the incipient stages. Laboratory analyses of stomach contents are unfortunately of no positive value at this period. Examination of the stools for occult blood, by either the Weber modification of the Boas' test, or Klnuge's aloin test, has aided us somewhat in our series. The technique of these tests is beautifully simple, and they form valuable additions to our former aids in differentiating obscure gastric, duodenal or biliary conditions.

Many of our cases of cholelithiasis have

shown the same variation from the classical symptom complex, that we have just noted in gastric and duodenal ulcer. In place of attacks of colic with jaundice, acholic stools and bile in the urine, many cases have given a history of dull, boring pain, ill-defined in location, but situated as a rule in the epigastric or right hypochondriac regions, and in some cases with marked digestive disturbance, and perhaps occasional attacks of vomiting. The so-called typical symptoms were conspicuous by their absence. Cases where calculi have ulcerated through the gall bladder or ducts, presented in their history, exceedingly ill-defined symptoms of such a serious condition having existed in these regions.

The following case is beautifully illustrative: Mrs. N., Scandinavian, aged 36, mother of five children, youngest three months old, presented herself at the hospital for relief from frequently recurring attacks of colicky pains in the epigastric region, which had given occasional trouble for three or four years, but since last confinement has been frequent at intervals of a week or ten days. Never was confined to bed except in childbirth. No history of jaundice, acholic stools or biliary urine could be elicited. Tenderness present in gall bladder region.

Diagnosis: Gall stones, confined to gall bladder. Operation disclosed numerous old adhesions, a small gall bladder, containing seventy-two small concretions, round and soft in character; pelvic and cystic duct distorted. A surprise came in the form of an irregular concretion, hard in character, and about five-eighths of an inch in length by one-fourth inch in diameter, lying in the interior wall of the common duct, through which it had doubtless ulcerated. The lumen of the duct was free. Cholecystectomy with drainage was performed. The very interesting feature of this case was the absence of any adequate history pointing to the period at which the concretions escaped from the choledochus. The local conditions at the operation warranted the assumption that this had occurred months and possibly years before.

In these cases the Weber test, for occult blood in the stools, may aid in differentiating this from a gastric or duodenal condition. Our cases of cholecystitis, and those with a malignant disease of the gall bladder or ducts, have conformed quite closely to the accepted clinical types, although in these conditions, as in others, each case must be studied by itself. Courvoisier's Law: "In cases of chronic jaundice, due to a blockage of the common duct, a contraction of the gall bladder signifies that the obstruction is due to stone; a dilatation of the gall bladder is due to causes other than stone," will, when intelligently applied in chronic jaundice, aid us greatly in correctly interpreting

the condition. If the jaundice is accompanied by distension of the gall bladder, malignant disease in the head of the pancreas, or in the choledochus should, reasonably be inferred.

A diseased appendix with its tip pointing up beneath the liver, has in a few instances in our work, simulated an hepatic or gastric condition. Cases of catarrhal appendices, with a peri-colitis accompanying the ascending colon, to the hepatic flexure, will, we have experienced, very often give symptoms of ill-defined pain in the epigastric region. Occasionally a nephropotosis, in which a floating kidney has been the cause of traction upon the duodenum, will also be mistaken for some other condition.

The literature has been very rich in the past two years in new observations upon pancreatic diseases. In our seventeen years of hospital work, it has never been our fortune to meet with any of the acute pancreatic conditions. The chronic forms of pancreatic inflammation have, in our experience, been accompanied by either a cholecystitis, cholelithiasis, or calculi, in the common duct or ampulla, and the condition has been discovered at operation. In these cases, the head of the pancreas has given the gross appearance of a chronic interstitial inflammation. The Robson Camage test for glycerol in the urine, in acute pancreatitis with fat necrosis, promises us a means of diagnosis of these conditions, which formerly were only discovered at the operating table, or autopsy. The technic of this test, however, is somewhat complicated, and this will prove a bar to its general adoption, except in the larger hospitals where the best of laboratory skill is always available.

The palpable tumors, not infrequently found in the epigastric region, are sometimes perplexingly difficult of accurate diagnosis. Emaciation, vomiting and gastric dilatation accompanied by a palpable tumor, of moderate dimensions, will of themselves make a diagnosis of carcinoma of the pylorus easy and reasonably certain.

On the other hand, a tumor more or less indefinite in outline, unassociated with pain or local distress, with only moderate impairment of the general health, giving a vague history as to date of appearance, possible causation, etc., would suggest, among other things, localized tubercular peritonitis; a suppurating mesenteric gland, more or less in the nature of a cold abscess, a syphilitic deposit in the liver, chronic fecal impaction of the colon, and, possibly, aneurism of the hepatic artery.

Again, the presence of a definite tumor, with a history of occasional pain or distress in the epigastric region, but otherwise with a feeling of physical well-being in the intervals, might require great care in dif-

ferentiating between movable right kidney, associated with Dietl's crises; a cystic gall bladder due to impaction of biliary calculi in the pelvis or cystic duct, with occasional colic; Riedel's lobe, a linguiform process of the liver; and, if the patient should happen to be of Icelandic nationality, an echinococcus cyst.

The following is a case in point: C—, female, aged forty-two years, mother of one child, gave a history of severe pain occurring at intervals of a month or two; uncertain as to yellowness of skin, conjunctiva and color of stools; but certain as to high color of urine, after attacks of pain, and the presence of a lump under the ribs on the right side. Diagnosis halted between cystic gall bladder, due to calculus impaction of the pelvis or cystic duct, and movable right kidney. The history of the case and the fact that the tumor was palpable in the angle between the right rectus and the chondral arch, and seemed to have a very limited range of motion, which in no way resembled the slipping disappearance under the ribs of a movable kidney, made a diagnosis of cystic gall bladder seem probable, if not certain. Under the anesthetic, this opinion gained in strength, from a further examination. A small exploratory incision revealed a normal gall bladder, while it disclosed a movable right kidney. Nephropexy cured the Dietl's crises—that is to say, they have not recurred in the past three years, since the operation.

Having considered some of the difficulties which may be encountered in the diagnosis of the commoner gastric, hepatic, renal, pancreatic and other diseases of this region, together with appendicitis, it is only necessary to mention the remaining rare conditions, which, at times, render diagnosis in this region still more obscure. Arterio-sclerosis in the splanchnic area, congenital diaphragmatic hernia, or the visceral crises of tabes dorsalis, may be an occasional source of error. Intestinal obstruction; acute gastritis; ptomaine poisoning; perforation of the gall bladder or duct, or of a gastric or duodenal ulcer; neoplasms of the mesentery; colon or omentum; or an aneurism, may all produce definite symptoms in this region, which may lead us astray. We have had cases of referred pain from pneumonia or pleurisy, in which correct diagnosis was made only after careful examination and study.

It would not be proper to dismiss this subject without giving some serious consideration to the value of the so-called "exploratory incision," as a means of diagnosis, looking to a permanent or temporary operative cure. At the present time, we must admit our individual limitations in diagnostic ability, under occasional circumstances. And herein lies a probable danger for the good name and prestige of surgery. Because of

the loose belief that an exploratory laparotomy will reveal the occult pathological condition, other pre-operative diagnostic means are not always completely exhausted. This must work to the disadvantage of patient and surgeon. In certain cases, acting with conservative interest, we must necessarily employ it, but it should be equally for therapeutic as well as diagnostic work.

However, I have great admiration for the surgeon, who, having exhausted his own diagnostic ability, as well as that of the internist and laboratory co-workers, in a given case, advisedly proceeds with an exploratory laparotomy, for it implies a supreme confidence, born of courage, resource, and experienced skill, in his ability to render his patient every possible benefit.

DISEASES OF THE KIDNEY.

By Dr. W. T. Marrs, Peoria Heights, Ill.

Before entering upon a discussion of the diseases to which the kidney is subject, let us first briefly review the anatomy and physiology of the organ.

The kidney is a compound tubular gland. A comparatively small number of large tubes empty into the pelvis; these, as they ascend into the body of the kidney, give off an immense number of very fine tubular branches. At the end of each one of these tubules is a small spherical enlargement, the capsule of Bowman. This capsule contains a tuft of capillary blood-vessels, called the glomerulus. These are the essential structures. They are held in place by a network of fibrous tissue, and are supplied with blood vessels, lymphatics and nerves.

Most of the water and the mineral salts which are found in the urine are secreted by the capillary vessels composing the glomerulus. The urea and other substances peculiar to the urine are secreted by the cells which line the small tubules.

The function of the glomerulus is not a simple filtration, as was at one time supposed, but the cells of this epithelium exert some selective action. The work of the lining membrane of the tubules is a true secretion. This latter function goes on at much the same rate, no matter what may be the pressure of the blood in the surrounding vessels; we are speaking now of its action in a state of health.

The amount of water secreted, and to some extent that of the inorganic salts, is greatly influenced by the blood pressure and by the amount of water in the blood. Thus we notice that if a man drinks a great deal of water he will pass a proportionately large amount of urine, but the percentage of urea will be less; the total amount being only a trifle greater than the normal.

The activity of the skin and bowels also affects the amount of urine secreted, for

a large amount of water may be eliminated through these channels.

Various diseases may attack the kidney. We will not speak of new growths, for they act here much the same as in other organs. The pressure of a tumor on the ureter may close it and cause a damming of the urine back into the kidney. A calculus forming in the pelvis of the kidney always produces irritation of the adjacent membrane, causing pus and epithelium to appear in the urine. It may grow to such a size as to stop up the ureter, or it may drop into that tube and cause a great deal of pain during its passage. In some cases the stone is unable to pass and lodges in the ureter, which is a very painful and often fatal accident.

There are several forms of inflammation of the kidney. The tuberculous and syphilitic infections act on the kidney as on other organs, causing the well-known tubercles and gummata, and interfering with the function of the organ in proportion to the extent of the involvement.

Of the usual forms of inflammation one of the commonest is an acute involvement of the lining membrane of the tubules. This is caused by any irritating substance which may be secreted in the urine. Nearly all outside poisons which are taken into the body are eliminated through this channel, and are followed by this form of nephritis. It may be of any extent, from merely a cloudy swelling of the epithelium cells from which they may recover, to the destruction of these elements. The degree of injury depends, of course, upon the virulence of the poison, the amount taken, and the rapidity with which it is thrown upon the kidney.

By far the greater number of cases of nephritis are caused by poisonous substances formed within the body itself. These poisons are produced by the waste of the tissues or by the action of bacteria in the blood, or in any organ from which the poison may be absorbed into the blood. The decomposition of undigested food in the bowel is also a fruitful source of such injurious matter. The nephritis which accompanies gout, scarlet fever and other diseases is an example of this class of cases.

In many chronic cases there is a proliferation, a hypertrophy, of the connective tissue of the kidney. This growth compresses the tubules, at first slightly, so as to interfere with the function, then progressively more and more until the tubules are obliterated.

When the lining membrane of the glomeruli is diseased or destroyed the serum-albumin of the blood is allowed to escape into the urine. It may come, also, from other parts of the tubule. In cases in which the epithelial cells lining the tubules are thrown off, these become matted together by means probably of a small amount of fibrin and other sub-

stances into cylindrical bodies which are known as tube casts. Thus we see that the presence of albumin and tube casts in the urine gives us a fairly good idea as to what is going on in the kidney.

No general rule can be given for the treatment of all cases of nephritis. During many years I have tried a great number of remedies, some of which I have found to benefit one condition, while others are appropriate to other conditions. But for the great majority of cases I have now come to rely upon anasarcin as the drug most likely to give speedy and tangible results. To show the nature and promptness of its action I will cite a few cases:

Case. 1. Mr. John H. Age, 60. This gentleman had been suffering with Bright's disease for nearly two years. There was a general odematous condition over the whole body and quite a large collection of ascitic fluid in the abdomen. Upon examination I found that his heart was acting very well, but that the kidneys were not secreting as much urea as they should. In the urine there was found upon each examination a small amount of albumin and also a number of tube casts.

I put the patient upon a milk diet and gave him a tablet of anasarcin every four hours. Instead of permitting him to drink plain water I put a teaspoonful of Epsom salts into each glassful which he took and allowed him to drink as much as he pleased. The dropsy disappeared within a few days, and the old gentleman says that he feels twenty years younger.

Case 2. Mrs. Mary C. On April 14th I found the patient exhibited all the symptoms of acute uremia. There was a general edema. She must have had some disease previous to this time, but it had produced no symptoms, and the present attack seemed to have been brought on by her being caught in the rain.

Remembering the success I had had with anasarcin in the case cited above, I immediately prescribed one tablet every three hours for the first day, and every four hours the second day. She was also given hot drinks and put on a light diet. Her recovery was complete within a week.

Case 3. Mrs. B. This is an elderly lady, who has been suffering for several months from renal dropsy. I have lately put her on anasarcin, and find her to be steadily improving.

IMMUNITY.

By Albert Anderson, M. D., Willson, N. C.

Infection and immunity are correlated subjects, and these have interested and engaged the leading scientific minds of the past century.

* Read before N. C. Med. Society.

What we understand by immunity is that power or ability in the human organism to prevent the introduction and the effects of bacterial poisons. Or immunity may be the result of the work of these bacterial poisons.

It is classified as follows: Congenital, acquired, individual or racial.

Immunity is artificially acquired by the introduction of another infection, as vaccine virus; by the introduction of cultures properly prepared for this purpose; by the introduction of serum from immunized animals. This form of induction is not as lasting as that inherited or produced by a previous attack.

The mechanism of immunity has been put upon many bases, but no basis supports the whole truth, and there is some light thrown on this interesting question through all the theories, from the early one of Cheaveau down to Ehrlich's chemical affinity.

It was thought at one time that anthrax bacilli killed by a mechanical plugging of the blood vessels. But soon a step was taken forward and the fact ascertained that it was the toxins that killed.

Cheaveau advocated a partial truth in stating that immunity came about by the cells of the body becoming accustomed to the presence of toxins—parallel with a well-known fact in therapeutics of the increased tolerance of drugs. Pasteur, perhaps the one of all others who towered above as the loftiest peak in the range of bacterial workers, advanced the theory of exhaustion, which has been proven by Bitter to have no evidence at all for its support. And we learn from this theory of the great Pasteur, that it is possible for the greatest to make mistakes.

To my own mind, the most fascinating doctrine is phagocytosis, the principle of which is that "The wandering cells of the animal organism, the leucocytes, possess the property of taking up, rendering inert, and digesting micro-organisms with which they may come in contact in the tissues."

But about four years later, 1888, Nuttall, of our country, put forth a theory involving scientific principles "upon which rests all serum therapy, that of the anti-bacterial action of the animal economy." He proved that the leucocytes did not do the work attributed to them by Metchnikoff, but the serum of the blood was the germicide mainly. In the application of these principles, Behring and Roux got ahead of our countryman and produced anti-toxine diphtheria, but let us not forget Nuttall and demand for him equal merit with these two and as high a niche in the temple of serum therapy—for he was the one who first laid deep and sure the basis of this wonderful discovery—which gives immunity and cures disease.

By those who have the best right to know, Ehrlich has promulgated the workings of

how this wonderful thing, immunity, is produced, and made it so plain that there is no longer any use to speculate about it, and at this point I am reminded of that witty expression of the lamented Dr. O'Hagan regarding a case of smallpox. "So plain was it that a wayfaring man though a d— fool could tell it afar off." But to me Ehrlich's theory of chemical affinity in both natural and acquired immunity is as difficult to comprehend as the differential diagnosis, to some doctors, between variocella and variola. I quote: "In natural immunity the cells of the animal organism do not furnish side chains capable of forming a chemical union with the toxin. Acquired immunity is due to the over-production of receptors by the cells of the body. Those which are produced in excess of the requirements of meeting and counteracting the toxins present are thrown off into the circulation and remain ready to combine with any toxin having the same affinity that may thereafter be formed or gain entrance to the body." Antitoxins of diphtheria, tetanus, bubonic plague and streptococcus infections are sera which have done the most valuable service.

It is known that antitoxins may disappear from the blood without necessary loss of immunity, and death may occur while the blood is saturated with antitoxin. It is only a neutralizing agent, not one of regeneration. By it the body is able to resist and counteract infection, and only in this way assist in restoring the body to health.

As stated above, Ehrlich to me is hard to understand, and I wish to quote Behring's definition of his antitoxic theory. "The same substance which, when incorporated in the cells of the living body, is the prerequisite and condition for an intoxication, becomes a means of cure when it exists in the circulating blood."

Of all the sera, that of diphtheria has given the most brilliant record, having reduced the mortality from forty to fifteen per cent. That for tetanus has not given the desired results. That for streptococcal infection acts well in one, but not in mixed infections. Those for typhoid and pneumonia are in the experimental stages.

The anti-plague serum has greatly reduced the number of cases and mortality from thirty-three to thirteen per cent. Mixed infections is the great obstacle to overcome, and it has been suggested to determine the mixture and use the sera accordingly.

After selecting this subject I almost despaired of preparing a paper till I saw our program, and there I learned that Dr. Faison was coming with infection, and that I had to prepare an immunity for my fellow co-laborers at this meeting, to counteract, perchance, some fatal toxine infection that the Doctor might bring. So rest assured I'll protect you so far as I can.

Immunity! what a blessing! ! In epidemics of smallpox, measles, scarlet fever, diphtheria, typhoid fever and others, we appreciate the value of immunity natural and acquired, individual or racial, and to obtain this inestimable blessing is the end to which we must attain by any or all means—money, time, labor or sacrifice.

So let the profession say to scientific searchers after remedies conferring immunity upon the human race, labor on at last at our expense till they are found and we will place you in the gallery of immortelles—Jenner, Pasteur, Nuttall, Behring, Raux, Ehrlich, and others. So I would request the author of infections to join me in conferring immunity, and thus increase longevity and happiness by the conscious security and integrity conferred by this wonderful quality.

I have not undertaken to spread before you the different theories of my subject in detail as promulgated by Metchnikoff, Cheauveau, Ehrlich and others for this good reason: I do not fully understand them, and I refer you to the standard books for explanation and content myself in saying to you that immunity from infections is the greatest thing the body can possess.

THE NORTHERN TRI-STATE MEDICAL ASSOCIATION'S THIRTY-FOURTH SEMI-ANNUAL MEETING.

This society will meet at the Century Club, Elkhart, Indiana, January 8, 1907. The following papers will be read

1. Peritonitis....R. R. Alwood, Montpelier
2. The Roentgen Ray as an Aid in Diagnosis.....P. M. Hickey, Detroit
3. Blastomycosis: A lantern slide demonstration with special reference to cases of systematic infection with Blastomycetes.....
.....Oliver S. Ormsby, Chicago
4. Rectum.....T. B. Breck, Cleveland
5. The Treatment of Gastric Ulcer..
.....Wm. A. Dickey, Toledo
6. Clinical Experiences in the Application of Wright's Opsonic Theory.....A. P. Ohlmacher, Detroit
7. Some Experiences with Cholelithiasis..Budd Van Sweringen, Ft. Wayne
8. Factors Influencing the Early Diagnosis of Gastric Carcinoma....
.....Willard J. Stone, Toledo
9. Aneurism of the Gluteal, requiring ligature of the Left Common Iliac Artery.....Wm. J. Gillette, Toledo
10. Home Treatment of Tuberculosis,
.....B. R. Shurley, Detroit

EVENING SESSION.

11. Medical Treatment of Hemorrhage, Cerebral Apoplexy, Hemorrhage in Typhoid Fever, Ulcer of the Stomach, Hemorrhage of the Lungs, etc...Geo. W. Webster, Chicago
12. The Differential Diagnosis of Functional from Organic Diseases of the Nervous System.....
.....Hugh T. Patrick, Chicago

THE RELATION OF CONCENTRATION OF PHOTODYNAMIC SUBSTANCES TO THEIR EFFECTIVENESS.

Jodlbauer and Tappeiner (Munchener Med. Wochen.) report on the results of some studies undertaken to determine the concentration at which a maximum of effect may be obtained from solutions containing photodynamic substances. Solutions of potassium iodide and invertin containing known graduated amounts of fluorescent bodies were subjected to the action of sunlight for definite lengths of time. On estimating the amount of chemical change produced it was found that at a certain concentration a maximum result was obtained, and that stronger or weaker solutions proved less effective. For eosin the most favorable strength was 1-2000 of a normal solution. From these observations, the authors conclude that in making therapeutic use of fluorescent substances the effort should be made to bring the fluid into the tissues in its optimum concentration. With eosin, whose molecular weight in grams is 692, this would be a .04 per cent. solution. If the tissues were simple fluids, the required dilution would be obtained by applying the eosin solution in double strength. Owing to the laws of osmosis, however, the protoplasmic cells can be more rapidly acted on by stronger solutions, but their use is contraindicated owing to the absorption of effective rays that takes place in thicker layers of the fluids. Therefore, more concentrated solutions are suited for local applications only when thin layers of tissue are to be treated, and the solution is used sparingly.

A NOTE ON THE TREATMENT OF THE TOXEMIC SYMPTOMS IN SCARLET FEVER.

A. K. Gordon (The Lancet) reports that out of 55 cases of severe toxemic scarlet fever treated with mixed or polyvalent antistreptococci sera 43 recovered. He used the serum in doses of from 20 to 100 c.c., and had no ill effects. He advises the early administration of large doses as early as the toxemic nature of the disease is recognized.

THE NEW ALBANY MEDICAL HERALD.

JANUARY, 1907.

Old Series Vol. XXV, No. 831. New Series Vol. XIV, No. 184

GEO. HANLON DAY, M. D., Editor.

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EDITORIAL.

DIPHTHERIA.

C. F. Ober, M. D., of Manchester, N. H., in an article read before the New Hampshire Medical Society, looking back about twelve years, calls attention to the theory presented by Professor Cameron, of McGill University. In his article on diphtheria in Hare's Therapeutics, he said that the mind of the profession had been confused by the fierce fight between the localists and constitutionalists.

His belief is, or at least was at that time, that diphtheria is a local specific disease, due to the presence and action of bacilli; characterized by a deposit of pseudo-membrane at the site of the infection; accompanied by constitutional disturbance and followed by nervous symptoms due to the absorption into the circulation of toxalbumin.

He also believes that diphtheria and membranous croup are identical and says that

those physicians who believe that true croup is diphtheria and contagious, and who base their treatment on this belief, will succeed in saving the most lives and limiting the spread of the disease.

He argues that in order to treat diphtheria understandingly and successfully one must be able to answer the question, "Is diphtheria at first a local or a constitutional disease?"

Welch says diphtheritic bacilli develop only locally at the site of infection and are found only in the pseudo-membrane, mostly on the surface, not even in the subjacent mucous membrane; they do not invade the tissues or circulation, but they generate, at the point of entrance, a highly poisonous chemical substance, the absorption of which produces the constitutional symptoms.

Let us remember that the above was written about twelve years ago, before the advent of antitoxin, which was first used in 1895.

In the light of our present knowledge. it would seem to be wiser to consider diphtheria constitutional from the first with a local manifestation and to commence at once both local and constitutional treatment.

At the end of my paper I shall say considerable about this, but wish to speak now of the etiology.

In Parkes' "Handbook of Infectious Diseases," I have found a very concise summary of eight sources of diphtheritic infection, viz.:

1. From a previous case either acute or convalescent.
 2. From a case of apparently simple tonsillitis.
 3. From a case of apparently simple nasal ulceration or ozena.
 4. From domestic animals, as cats, pigeons or fowls.
 5. From cow's milk, by human infection of the milk in cow sheds and dairies.
 6. From infected bedding, clothes, carpets, curtains, books, toys, cups, spoons, forks, etc.
 7. From a person who has been in contact with a diphtheritic patient, but who has not himself contracted the disease.
 8. From defective sanitary conditions.
- Right here I would like to add the opinion that a ninth source of infection may sometimes be found in the common practice in many towns and cities of furnishing a common stock of pencils, penholders, etc., for the use of school children.

These articles are gathered up every school session and distributed again the next session, and it is a well known fact that both boys and girls will often hold such articles in their mouths more or less of the time. However, in many schools various devices have been put into use for the purpose of securing the same pencils

to the same scholars at each school session.

It is believed that there are scattered among the general public a considerable number of persons, even if they have not been recently and directly opposed to diphtheria, who have typical diphtheritic bacilli in their throats, and it would seem that the occupation of the individual makes him more or less dangerous as the case may be.

For instance, those who are engaged in handling articles of food, as milk men and those whose work brings them in close contact with small children—as nurses—are more likely to spread the disease than persons working at trades or in stores.

It is evident that early and exact diagnosis is very necessary. As physicians are most likely to make mistakes in distinguishing between diphtheria and follicular tonsillitis, I will insert here a little table which I have found very useful in making a differential diagnosis between the two diseases.

1. In diphtheria glandular swelling is almost invariably present. In follicular tonsillitis it is usually absent.

2. Diphtheria often does not reach its height for four or five days. Follicular tonsillitis often does in twenty-four to thirty-six hours.

3. Nasal symptoms. In diphtheria regurgitation and bloody discharge are often present; in follicular tonsillitis neither one.

4. In regard to the membrane. In diphtheria it may not be visible for two days; in follicular tonsillitis it is usually present at the first visit. In diphtheria the membrane is frequently uni-lateral for a day or two; in follicular tonsillitis almost always bi-lateral at once. In diphtheria the membrane clears off slowly, sometimes lasting five to ten days, though it clears more quickly if antitoxin is used; in follicular tonsillitis it clears off quickly, often in two to four days.

A prompt detection can not be made in all cases by a clinical diagnosis—no matter how skillful the diagnostician.

To be absolutely certain the culture test must be applied.

Hare says the only pathognomic feature of diphtheria invariably present is the specific micro-organism known as the Klebs-Loeffler bacillus, and the only way that a positive diagnosis can be reached is to have a bacteriological examination made.

Whenever such an examination reveals the Klebs-Loeffler bacillus the physician knows positively that he has in hand a case of diphtheria.

The Bulletin of the Delaware Bacteriological and Pathological Laboratory, issued about two and one-half years ago, says: "If the physician sends to the laboratory a cotton swab which has been rubbed over the membrane, or inflamed portion of the

throat, the laboratory may or may not prove the presence of true diphtheria. If the result is positive, the case is one of diphtheria and is at once to be treated with antitoxin and isolated to prevent infection of others, but if it is negative the antitoxin treatment is useless."

Right here I would like to record my belief that it is better to give at least one proper dose of antitoxin at once in any suspected case without waiting till we hear from the laboratory.

Sometimes it has been found that certain forms of mild sore throat, which hardly any physician would think of calling diphtheria, have revealed the presence of true diphtheritic germs.

The true nature of such cases needs to be recognized and the laboratory alone can settle such questions.

In June, 1893, the State Board of Health instructed the local boards and physicians of New Hampshire to regard all membranous deposits as diphtheria and to take the same precautions as for diphtheria. Many physicians have come to the conclusion that membranous croup is only a form of diphtheria, and Dr. John B. Roberts, of Philadelphia, says it makes no difference to him whether some pathologists call it croup and some diphtheria, he calls them all diphtheria, and he advises physicians to always report these cases as diphtheria.

Dr. Herman Biggs, of New York, reported to the New York City Board of Health the results of bacteriological examinations of thirty-six cases of so-called membranous croup. In thirty out of the thirty-six cases, the Klebs-Loeffler bacillus of diphtheria was abundantly present.

During the space of four months nearly eighty-four per cent. of cases of so-called membranous croup reported to the health department proved to be genuine diphtheria.

In January, 1900, Dr. Denny, of Brookline, Mass., read a paper at a meeting of the Norfolk District Medical Society, which was based upon practical experience as a bacteriologist.

This paper illustrates one way in which diphtheria may be accounted for without direct exposure to a prior case—through infection carried in the throats of well persons.

The occurrence of the Klebs-Loeffler bacillus in the throats of healthy persons who have never shown any symptoms of diphtheria, has caused much misunderstanding among physicians.

Nurses who have been taking care of diphtheria patients frequently have the bacillus in their throats, though they do not develop diphtheria themselves.

Another puzzling condition of things is illustrated in a paper by Dr. W. G. Bissell, bacteriologist, of Buffalo, N. Y., in which he

shows that certain conditions of the throat, clinically looking like diphtheria, may be produced by other germs, and may need a different treatment, as, for instance, by antistreptococcus serum. This again shows the importance of an early bacteriological examination.

Osler says: "The presence of the Klebs-Loeffler bacillus is regarded by bacteriologists as the sole criterion of true diphtheria, and as this organism may be associated with all grades of throat affection, from a simple catarrh to a sloughing, gangrenous process, it is evident that in many instances there will be a striking discrepancy between the clinical and the bacteriological diagnosis.

"One inestimable value of recent studies has been the determination of the diphtheritic character of many milder forms of tonsillitis and of pharyngitis." He also says: "Where a bacteriological examination can not be made the physician must regard as suspicious all forms of throat affection in children, for mistakes are most likely to occur in the various lighter forms of membranous angina, many of which are in reality due to the Klebs-Loeffler bacillus." Other infections may simulate diphtheria and it has been shown that many mild cases and some fatal ones, having clinically the appearance and symptoms of diphtheria, do not reveal the existence of the bacillus of diphtheria, but are due to some other form of infection.

Sternberg says: "In certain forms of diphtheria, and especially when it occurs as a complication of scarlet fever, measles and other diseases, the Klebs-Loeffler bacillus is absent and a streptococcus is found in considerable numbers which is probably the cause of the diphtheritic inflammation."

In the Sanitary Bulletin for January, 1902, the editor cautions physicians against making the mistake of relying upon a single bacteriological examination, when that proves negative. He says that a single negative result should not, in the least, swerve the attending physician from his candid judgment of the case from a clinical standpoint.

In a mild case of diphtheria or in the earlier stages of the disease, in any case there may be but few bacilli, and they may be hidden in the folds or follicles of the mucous membrane, so that in using the swab it fails to take up any of the germs, and of course a negative culture in the laboratory will be the result.

In all cases where the clinical symptoms continue, following a first negative result, subsequent specimens should be taken daily until at least three negative results have been obtained, unless a positive result should be determined before. Able authorities have concluded that bacteriological examinations for release from quaran-

tine would insure better public protection against diphtheria.

They would also shorten the average period of isolation and lessen the expenses in a large number of cases.

The sequelae most frequently observed are of nervous origin in the different forms of paralysis.

The most common form of paralysis is that of the soft palate, when the voice becomes harsh and nasal, and fluid regurgitates through the nostrils.

Next in frequency comes certain eye troubles, as paralysis of the ciliary and ocular muscles. When the ciliary muscles are involved we may find loss of accommodation and when the oculo-motor muscles are affected there may be strabismus. Next in frequency is paralysis of the muscles of the lower extremities, usually preceded by a feeling of coldness, numbness, tingling or pain, though there may be anesthesia. The upper extremities may be similarly attacked or one set of muscles may alone be affected.

Physicians of the present day are obliged to answer one question when they are called to a case of diphtheria, that in former times they were not required to answer, viz.: "Shall I use antitoxin?"

In regard to the use of it, I think all physicians may be divided into three classes: 1. Those who depend on antitoxin alone. 2. Those who use it in connection with other treatment. 3. Those who will not use it at all.

Antitoxin was first used in 1895, and after it had been in use some over four years, the American Pediatric Society reported upon its use in five thousand seven hundred and ninety-four cases, which occurred in the practice of six hundred and fifteen different physicians, who pronounced strongly in its favor, as the results showed a diminution in the mortality from 12.3 per cent. to 7.3 per cent.

A writer in the Medical News, advocating promptness in the use of antitoxin, says that all cases recovered in which antitoxin was used on the first day; 2 per cent. died when it was used on the second day; 10 per cent. died when it was used on the third day; 20 per cent. died when treatment was begun on the fourth day; and 33 per cent. died if antitoxin was not given first till the fifth day. This shows the great importance of using it on the first day.

It seems to me that a young physician just starting in practice must find himself somewhat bewildered when he meets his first case of diphtheria, to decide what line of treatment he had better employ.

I judge he would be bewildered because in a recent work on therapeutics I find a list of about fifty remedies mentioned as being used in the treatment of diphtheria,

and it seems to leave the young physician to take his choice between them, without much help or guidance.

If I were called upon to give advice to a young physician who had a case of diphtheria on his hands, I would advise him, first of all, to inject a proper-sized dose of antitoxin, and then send a culture tube to the nearest bacteriological laboratory.

As soon as that was done I would advise him to commence at once to saturate the patient's system with the sulphide of calcium, which at the present time is being used very successfully in many parts of the United States in the treatment of diphtheria.

In the third place I would advise him to very frequently spray the throat and nose with the peroxide of hydrogen—using a good throat atomizer.

If he carried out these three measures persistently and thoroughly, doing no half-way work, I should expect the young man to save a very large majority of his diphtheria patients.

As the sulphide of calcium is attracting considerable attention, it may be well to state just how it acts. In the first place it is called our best systemic antiseptic, and it is decomposed in the gastro-intestinal canal into the sulphate of lime and sulphuretted hydrogen. The sulphate of lime passes out of the system with the feces, and the sulphuretted hydrogen is absorbed by the blood and eliminated through the glands of the skin and of the mucous membrane of the respiratory tract. The breath of the patient who is taking this remedy is heavily charged with the odor of sulphuretted hydrogen—that is, if the physician is using a reliable preparation—and sometimes the perspiration is also. While this gas passes through the mucous membrane, it stimulates the function of the mucous glands. If these glands have not been destroyed by ulceration, the secretion of mucus may still continue under the false membrane, which then becomes soft and loose and is sometimes detached in flakes. While the germicidal property of sulphuretted hydrogen is not very great, its beneficial effects are produced through its action upon the mucous glands.

If a physician does not obtain good results from the use of calcium sulphide, I think it may be because he has not succeeded in purchasing a reliable article, as I have tried the products of several firms and found them to be wholly inert. The ordinary tablet triturate will soon spoil from oxidation and physicians should remember this or they will be probably disappointed.

Sometimes in diphtheria the patient will need moderate doses of strychnia to fortify the heart and sustain the nervous system.

In the laryngeal form of diphtheria, in addition to the above treatment I should make use of steam.

With adult patients the steam atomizer may be used, but with children it is often better to construct a sort of tent over the bed, so that the child may breathe a steam-saturated air. The steam may be used plain or medicated, as preferred; but I believe it is often wise to use something like the oil of turpentine, to which a little oil of eucalyptus may be added.

When these measures are thoroughly carried out I believe it will hardly ever be necessary to resort to either intubation or tracheotomy.

What the generally accepted treatment of treatment of diphtheria will be in five or ten years from now, none of us can say; but, judging from numerous reports, it seems that at the present time a very successful form of treatment may be described as resting upon a tripod—one leg of which represents the immediate injection of an appropriate dose of antitoxin; the second leg of the tripod represents the thorough saturation of the patient's system with a reliable sulphide of calcium; while the third leg represents the frequent spraying of the throat and nose with peroxide of hydrogen.

The various complications which may arise, and the after tonic treatment, can be met with these remedies which every physician learns to look upon as his favorites.

HYSTERIA.

This word comes from the Greek name for the womb, and was first applied to cases of this class because it was supposed that the disease originated from some trouble in that organ. It is true that many cases are associated with diseases of the sexual organs, but there are a great many others in which these organs are in perfect health, and there are no symptoms which can be referred to them.

It is a matter of fact that the great majority of hysterical patients are women, but men are by no means exempt from the disease. In this country the very severe and dangerous cases are rare, but in Italy, Spain, and especially France, they are much more common.

A great deal of excellent investigation has been done along this line, notably by Charcot in France and by S. Weir Mitchell in America. In the brief space of this article we can only call attention to some of the more usual aspects of the disease, and such as are liable to be met with by the ordinary practitioner.

In the first place, hysteria may simulate any kind of nervous disease, and sometimes

ANEMIA AND ITS RELATION TO CATARRHAL INFLAMMATION.

No disease is more common than chronic inflammation of the mucous membranes. doubtless many causes contribute to the prevalence of this malady which spares neither the young nor the old, the rich nor the poor, the high nor the low. Prominent in its etiology, however, are sudden climatic changes, the breathing of bad or dust laden air, bad hygiene in personal habits, and bad sanitary surroundings. These factors all singly or collectively tend to lower the vitality of the whole human organism, and as a consequence the cells throughout the body perform their various functions imperfectly, or not at all. The quality of the blood becomes very much lowered, with the result that tissues that have important work to perform, do not receive sufficient nourishment and so falter from actual incapacity. The red blood cells are reduced in numbers and the hemoglobin is likewise diminished. Because of the blood poverty the digestive process is arrested, nutritive material is neither digested nor absorbed, and a general state of inanition ensues. It is not surprising under these circumstances, therefore, that chronic inflammation of the mucous membranes is produced. These highly organized structures with very important duties to perform naturally suffer from insufficient nutritional support, and the phenomena of catarrh follow as a logical result. Perversion and degeneration of the cells in turn takes place, and more or less permanent changes are produced in the identity and function of the tissues.

Appropriate treatment should consist primarily in correcting or eliminating all contributing factors of a bad hygienic or insanitary character. The individual should be placed under the most favorable conditions possible and every effort made to readjust the personal regime. Local conditions of the nose, throat, the vagina, or any other part, should be made as nearly normal as possible by suitable local applications or necessary operative procedures. Then attention should be directed immediately to improving the quality of the blood and thus increase the general vitality. For this purpose vigorous tonics and hematics are desirable and Pepto-Mangan (Gude) will be found especially useful. Through the agency of this eligible preparation, the blood is rapidly improved, the organs and tissues become properly nourished and accordingly resume their different functions. Digestion and assimilation are stimulated and restored to normal activity, and the various cells and organs start up just as would a factory after a period of idleness. In fact Pepto-Mangan (Gude) supplies the necessary elements that are needed to establish the harmonious

working of the whole organism. When this result is achieved, the catarrhal condition is decreased to a minimum and distressing symptoms are banished, a consummation that is highly gratifying to every afflicted patient, and every earnest practitioner.

BOOK REVIEWS.

Blakiston's Quiz-Compend. A Compend of Genito-Urinary Diseases and Syphilis, including their surgery and treatment, by Charles S. Hirsch, M. D., assistant in the Genito-Urinary Surgical Department, Jefferson Medical College hospital. Illustrated. P. Blakiston's Sons & Co., 1012 Walnut St., Philadelphia. 1906. Price, \$1.00.

This book epitomizes the subject of which it treats and contains these facts of the larger text-books. The surgical anatomy of the organs of the urogenital tract is especially commendable. The newer aids to diagnosis are given due consideration. Medical and surgical treatment including formulae of prominent men adds to the books importance. The author is a well known quiz-master, and is especially competent to condense material of this character.

Physicians' Visiting List (Lindsay & Blakiston's) for 1907. Fifty-sixth year of its publication. Price, \$1.00. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa.

This visiting list has long enjoyed popularity with the medical profession. This is easily accounted for when one examines it and sees its many points of excellence. It contains much information which often will be highly useful to the practitioner and this is all the more valuable because it is constantly at hand.

A Compend of Materia Medica, Therapeutics and Prescription Writing with especial reference to the physiological action of drugs. Based on the eighth revision of the U. S. Pharmacopoeia. Including also many unofficial remedies by Samuel O. L. Potter, M. D., M. R. C. P. Lond. Seventh edition—revised and enlarged. Published by P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia, Pa. Price, \$1.00.

The text of this edition has been thoroughly revised and brought into conformity with the eighth revision of the U. S. Pharmacopoeia. Twelve new articles and forty-three new paragraphs on important drugs have been inserted and sixteen articles have been rewritten. Material considered obsolete or comparatively unimportant has been removed, but the insertion of so much new matter and the adoption of a wider faced type have added thirty-seven pages to the book.

MEDICAL GLEANINGS.

Wound clips instead of sutures for all skin wounds of the face.

Intubation instead of tracheotomy whenever possible.

Chloral is a valuable remedy to dilate a rigid os and in reflex nervous irritation.

In any purulent affection use sulphide of calcium, 1 grain four times a day.

There are three conditions in which phlebotomy is the ne plus ultra; namely, apoplexy, eclampsia and pleurisy.

Don't forget that liq. ferri perchlor., with digitalis or cinchona, forms a black, ink-looking mixture. A small quantity of dilute phosphoric acid will make it clear.

A simple remedy for hiccough, the Medical Council reminds us, is that if we cause the patient to sneeze the hiccough often ceases.

Dr. Da Costa thinks that the three remedies to be depended on in acute nephritis are pilocarpine, digitalis and strontium.

In phosphorus poisoning sulphate of copper is a good emetic and at the same time acts as an antidote; it forms the phosphide of copper which is slightly soluble only.

The best way to avoid scattering the infection of scarlet fever is to apply to the surface of the body an oleaginous substance, none better than vaseline. The idea that the kidneys may be affected by an outward application of this kind to the skin is obsolete.

In eclampsia A. Laurendan recommends the use of scopolamine hydrobromide 1-50 gr., morphia 1-5 gr., and 15 gtt. fl. ex. veratrum viride, hypodermically, every hour-and-a-half, until three doses are given or convulsions cease. The last dose should contain but 10 gtt. of veratrum. If this fails, treatment should be discontinued (Thies) because of the fact that there is always increased pressure in eclampsia, tried lumbar puncture in fifteen cases which had resisted other treatment. It is very remarkable that the effect of puncture was least noticeable in those cases where pressure was greatest.

Garten condemns the treatment as dangerous because puncture produces lessening of secretion of urine and sometimes anuria.

The Laurendan treatment seems rational; yet we can not forget that phlebotomy, in puerperal eclampsia has saved more lives than any other treatment.

H. Gradle calls attention to the value of the odor test as a guide in the conservative treatment of ear disease. If the odor quick-

ly disappears with washing out with water, followed by boric acid applications, the disease is evidently superficial and requires no operation. Even when small areas of caries exist this treatment may sometimes suffice, though perhaps more time or some modification may be needed. When irrigation followed by boric acid applications fails to remove the odor within a few days it is useless to continue it. Intratympanic irrigation will occasionally succeed in dislodging pent-up pus or retained epidermic scales, whereon the odor disappears and the now accessible focus of suppuration heals, but not very often. In a certain number of cases the suppurating source is so inaccessible that these methods all fail to remove the odor of decomposition. The only successful conservative treatment for these cases in Gradle's hands has been careful tamponing with gauze, introducing narrow strips of good absorbent gauze, after proper cleansing, into actual contact with the source of the pus as far as it is visible. The efficiency of the method depends upon the dryness of the gauze and hence its frequent replacement. The improvement is slow, it is never less than three weeks, and often over six, before the gauze remains dry. The odor may persist till there is absolutely no secretion or it may cease when it has been reduced to a minimum, when suppuration often ends within a few days. Treatment by gauze drainage ends in a complete cure (50 per cent. of cases), partial cure (33.3 per cent.), or failure (16 per cent.). If properly done tamponing does not distinctly lessen the discharge within three weeks, and continue to reduce it, no ultimate benefit can be expected and operation only will succeed. As partial cures Gradle reckons those cases in which the drainage removes the odor but fails to stop completely the suppuration, a trace being left. He hesitates to recommend operation in these cases of partial success. With due care the patients get along without serious consequences, and in his experience the disease has lost its progressive and hence dangerous character when the odor has disappeared.

The cachexia resulting from malaria is often persistent, even after the active cause has been controlled. In such cases Gray's Glycerine Tonic Compound proves of great service in stimulating the reconstructive powers of the blood. The toxins resulting from the malarial hemolysis are rapidly eliminated, and increased impetus is given to the restoration of normal red blood cells.

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well in gonorrhea, gleet, and such diseases of the mucous passages. It is serviceable also in dysentery, in catarrhal inflammations of the nose, throat, mouth, gums, etc. Dr. W. M. Gray, Microscopist to the Army Medical Museum at Washington, D. C., by tests, has proven conclusively its bactericidal action as to the anthrax bacillus, the staphylococci of pus, etc. It combines the qualities of such agents as salicylic and boric acid, so that its application to diseased mucous surfaces has a mild stimulating and astringent effect in the rapid healing of diseased tissues. While it may be applied as a powder, when circumstances demand, the economy of its use consists in the fact that water (so as to make from ten to fifty per cent. solution) may be added at the time its use may be required. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

Our readers will note from the new antikamnia advertisement, which appears in this issue, that the Antikamnia Chemical Co.

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was prompt to file its guaranty under the new Pure Food and Drugs Act, their guaranty number being 10; which means that of all the food and drug manufacturers in the United States, only nine filed their guaranty in Washington before that of the Antikamnia Chemical Company. This shows the usual antikamnia disposition to protect the dealer and prescriber of antikamnia under the law and gives assurance of the absolute reliability of the antikamnia preparations.

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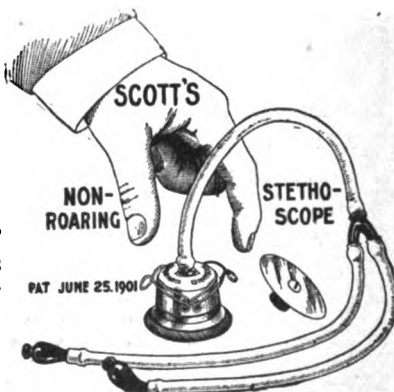
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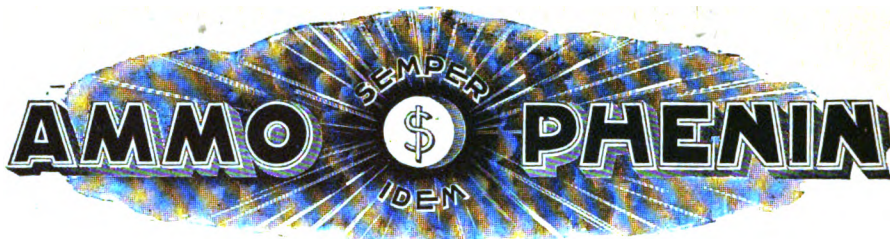
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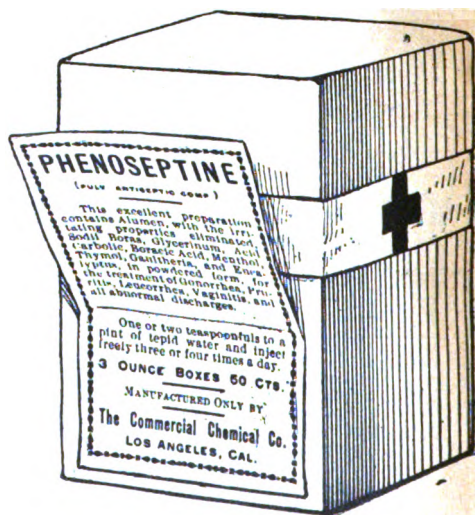
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THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV. No. 814.
New Series Vol. XIV. No. 185.

New Albany, Ind., February, 1907.

\$1.00 PER ANNUM.
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CEREBRO-SPINAL MENINGITIS.*

By F. Von Tobel, M. D., Lebanon. N. H.

The term cerebro-spinal meningitis, or to be more exact, epidemic cerebro-spinal meningitis, is used to define an acute infectious disease characterized by an inflammation of the pia mater of the brain and spinal cord. It is, therefore, not to be classed as a spinal disease per se, but rather an infection, having for its field of action the covering of the spine and brain.

The disease is known by many names on account of the great variety of forms it assumes, and the particular symptom which appeals to an individual observer. Cerebro-spinal meningitis, spinal fever, cerebro-spinal typhus and spotted fever are a few of the many names given to it. The name spotted fever is, I believe, wholly of American origin, and, of them all, is the least appropriate and most misleading, as it gives no inkling of the real trouble and refers only to one symptom, which symptom itself is absent in a very large number of cases.

HISTORY.

Undoubtedly the disease is of ancient origin, but only became recognized as a distinct entity about one hundred years ago. Previous to that it was probably considered some form of an already existing disease like typhus fever.

From 1805 to 1816 it visited many and widely separated parts of the world. The first to be described with any precision as a disease by itself was in Geneva, beginning in 1805, in which there were thirty-three fatal cases. The following year, 1806, it broke out in Medfield, Mass. Then for two years it raged quite extensively in Massachusetts, Connecticut, Ohio and Kentucky. In 1806-07 an epidemic occurred in the Prussian army; in 1807, among Spanish prisoners; in 1811, in Dantzic; in 1813, at Mayence and Brest; in 1814, in Grenoble and Paris. That was the end of the widespread epidemics for the time, though from then until 1837 limited epidemics or sporadic cases occurred, attracting little attention.

From 1837 to 1849 it was quite prevalent in France and Italy, being confined largely in those countries to the troops and garri-

son cities, and supposedly being conveyed from place to place by the moving of the troops. During this period epidemics are reported from Denmark, Ireland and the United States. From 1854-61 the whole of Sweden was affected by it. The disease traversed the country systematically from south to north, commencing each January where it left off the preceding May or June. In the seven years there were about eleven thousand cases with four thousand deaths in that country. During that time the neighboring country, Denmark, was only slightly invaded.

From 1861-68 was another epidemic period, being widespread in Germany, Ireland and the United States. From 1868 till nearly the present time the world was free from extensive outbreaks, sporadic cases or limited epidemics, however, occurring in many places from time to time. Nearly every country has been visited by it, Smyrna, Jerusalem and Oceanica having been invaded. So we see it is not confined to any geographic area.

ETIOLOGY.

The season seems to have a marked influence on the disease, a very large per cent. of cases occurring the first five months in the year—that is, the latter part of the winter and early spring. During the first six months of 1905 there were in Manchester 89 deaths from the disease, distributed as follows: January, 2; February, 11; March, 27; April, 27; May, 10; and June, 6. I endeavored to obtain statistics from other States, but was unable to do so as they had not been compiled. But a study of all the known epidemics will give just about the same distribution, showing the disease is pre-eminently one of the first half of the year.

Defective hygiene and overcrowding undoubtedly has an influence on the propagation of the malady, though I think largely in a general way by lowering the resisting powers of the people so surrounded rather than in any specific way.

Age is a predisposing factor. Children are most susceptible, youth next, the percentage of cases growing rapidly less as age advances. Of about one thousand one hundred cases occurring in Massachusetts from

* Read before the N. H. Medical Society.

1887 to 1895, six hundred and seventy-six cases, or about 60 per cent., were in children under five years of age; two hundred and seventy-five, or a little more than 20 per cent., were between five and ten, leaving only 20 per cent. for all ages above ten.

It attacks people robust and of previously good health by preference. Of one hundred and twenty-four cases studied by one observer in Cologne from 1885 to 1892, not one was a tubercular or scrofulous person. Others have not found this apparent immunity of the tuberculous so marked, though it does appear to be true that the most vigorous are the most susceptible to the disease.

The disease, especially when appearing as an epidemic, frequently, and I think usually, exists alongside of some other epidemic disease like influenza or typhus fever, with the latter of which it was formerly, and to some extent is now, confounded. It surely is present most extensively during the season when we look for the influenza to rage.

Whether the disease is contagious or not is a question on which authorities differ. I think the foreign writers are more inclined to believe it distinctly contagious than do those of our own country. While they think it less contagious than scarlet fever, measles, etc., they hold, nevertheless, that it is contagious from the patient direct or through a third person not affected, or from clothing or any article which has been in contact with a person affected. It doesn't seem that a study of the 1905 epidemic warrants such an assertion. Cases have been treated right in public hospital wards without a single instance of known contagion. When there had been about fifty cases in Manchester, a man who knew told me there had been but two instances where there had been more than one case in a family. Whether that held true throughout the epidemic I can not say. Most of the victims were in thickly-crowded tenement houses, with everything by way of filth and unwholesome surroundings to favor a spreading if the disease is contagious in any appreciable degree. The germ is of very low vitality, being quickly killed by drying or exposure to sunlight, which makes it highly improbable that it is conveyed by dust. There is no question but what the disease would be contagious if the germ could find passage from one affected to the meninges of another person. What is doubted is the ability of the contagium to thus be transferred.

The active cause of the disease is the *diplococcus intracellularis meningitidis*. How it enters the body is not definitely known. It is probably present at all times, like pneumonia or influenza; at certain seasons or under certain conditions becoming more numerous and virulent, thus producing an epidemic. The germ probably is inhaled, and finds its way into the cerebro-spinal

cord through the lymphatics, possibly through the cribriform plate of the ethmoid. The germ evidently at times produces a coryza when no meningeal symptoms arise, because the germs have gone no farther than the nasal mucous membrane, where it is frequently found in a healthy person.

PATHOLOGY.

The pathological process takes place in the pia arachnoid of the cerebro-spinal canal. It is characterized at first by a serous, later a purulent effusion on the visceral side of the pia mater, and if patient lives more than a few days it often appears as a fibrous, leathery membrane superimposed upon the brain and cord.

In the cerebro-spinal fluid obtained by lumbar puncture, the diplococcus is almost invariably present in the early stage of the disease. In cases that run ten to twelve days it is less often found, and in such as run weeks or months it is rarely found even in cases where it was present early in the disease, showing that the active life of the germ is short. The germ is also found in the contents of the herpetic vesicles situated on different parts of the body.

DIAGNOSIS.

The diagnosis is often obscure, especially in sporadic cases. It can easily be confounded in the early stages with influenza, typhoid or typhus fever, or with most any of the acute infectious diseases. The disease is often ushered in abruptly with a chill and headache, not unlike the diseases above mentioned. Temperature and pulse are somewhat variable. In young children the temperature is usually very high. In older people it may be high, but more often moderate, or occasionally subnormal. Pulse does not follow the temperature as in most diseases, but may be as low as 40, or in a few hours, or minutes even, be 150 with but little, if any, change in the temperature. The headache is as apt as any way to be frontal, especially at first. In some cases we see a retraction of the head, in others not; probably in the greater part of the cases retraction is present sometimes during the course of the disease.

Spots sometimes show in from one to three days, hence the name spotted fever, though I think that symptom is by no means constant enough to figure in the name. However, in some epidemics it is said to be very common, while in others it is entirely wanting. Herpes of the lips and nose occur as frequently or more so than the petechial spots generally ascribed to the disease. Hemiplegia and unequal pupils are seen in a certain per cent. of cases, though it is not a constant symptom. In the majority of cases an active delirium is present; in others the patient passes rapidly into a state of coma and death ensues.

The most valuable aid to diagnosis is lumbar puncture and examining the fluid obtained for the diplococcus. In that way only can we say positively that a given case is epidemic cerebro-spinal meningitis as distinguished from tuberculous meningitis or that resulting from the pneumococcus, although probably 90 per cent. of cases of primary meningitis are due to the diplococcus, the pneumonic and tuberculous forms more often being secondary to the respective processes elsewhere.

PROGNOSIS.

The prognosis is always grave, the mortality varying in different epidemics from 30 per cent. to 75 per cent. The mortality is usually greater during the early part of an epidemic.

COURSE.

The course of the disease varies from a few hours to some months, though in the sub-acute cases probably the trouble is not always, or perhaps never, due to the continued activity of the germ, but to the resulting interference with the nerve centers, and a slow death through an inability of the system to overcome the damage done, or from a general neuritis; or, if a partial recovery takes place, it is often with the loss of some function like hearing or seeing, or with perhaps a more or less extensive paralysis.

TREATMENT.

The treatment has been largely symptomatic—emptying the bowels thoroughly with a mercurial or saline, controlling pain and delirium with sedatives, as bromide, chloral or opiates, preferably hypodermically, together with ice to head and spine, or counterirritants to spine, warm baths and attention to the diet, has been about as successful as any line of treatment. More than thirty years ago Prof. Ziemssen in his classical encyclopedia said, and he put it in italics: "Morphine may be regarded as one of the most indispensable remedies in the treatment of epidemic meningitis," and from a medical standpoint we can say no more.

During the recent widespread and fatal epidemic physicians have been roused as never before to find some method by which the disease might be successfully combated. As yet but little of value has come to light. Lumbar puncture seems to give at least temporary relief in some cases, and doubtless has saved some by limiting the pressure on the brain and cord until the germ had ceased to be active. In a recent article in a foreign journal a Dr. Lenhartz details his experience with lumbar puncture as a curative measure. He has had good result. Cases where he has used it early, often are convalescent by the eighth day, and in one very unfavorable case the puncture was not

begun until the fortieth day. Improvement commenced at once, and the patient made a perfect recovery after a tedious convalescence. He advises the institution of this measure at the earliest possible moment that the diagnosis is made, and a small amount of fluid withdrawn every day or every second day.

One doctor at least, Dr. Helmuth, has trephined the skull and drained. The operation was pronounced a success, but I imagine the patient died as I never heard anything more about the case.

Of late diphtheria antitoxin has been quite extensively used, and with sufficient results, I think, to warrant its further trial. At the present I should say lumbar puncture and the diphtheria antitoxin, together with symptomatic treatment, offers as much hope as anything, which is saying but little.

During the epidemic of 1905, Lebanon was visited by the disease, we having six cases with five fatalities during the winter and spring. None of these were my cases, though I saw all but one of them in consultation. A brief mention of these cases will be all that could be interesting.

Case 1, was a strong, unusually rugged appearing man about forty-five years of age, a painter by trade. He was taken sick January 29th. The physician very naturally took it to be a severe case of grip. He had a severe frontal headache and other symptoms of the grip. He kept steadily growing worse. I saw him on the morning of January 30th. Temperature had been running around 103, pulse somewhat lower than would naturally correspond with the temperature. He had become violently delirious during the night. At that time he showed unequal pupils and partial paralysis of left side. He failed rapidly, and died January 31st, after being sick forty-eight hours.

Case 2 and 3, brother and sister, aged five and nine respectively, were taken sick about the same time, or it may be a day or two apart. Both taken with convulsions. They continued to have some convulsions for three or four days at frequent intervals, between the attacks they lying in a state of semi-coma. In a few days the symptoms began to clear up somewhat, and they passed into a state like a slow fever. The temperature averaged about 101 or less. I saw them after they had been sick five or six weeks. Found them emaciated. Inclined to lie curled up in bed, and the least attempt to turn them or to straighten their limbs or raise their heads would call forth cries of pain. After another month they appeared to improve slowly, so they were up and about, though with some loss of muscle power and control. Suddenly, about three months after the commencement of the attack, the older one developed acute cerebral symptoms and

died in less than forty-eight hours. The other child, I believe, is well.

Case 4, strong young man twenty years of age, working in key shop. First called doctor on morning of March 21st. Was thought to be suffering from grip or beginning typhoid. Most prominent symptom was frontal headache. Temperature high, pulse rather slow in comparison. I saw him in consultation that night. Found him in a comatose condition, and it was evident he was dying from meningitis, which he died early the following morning, twenty-four hours after the onset of the disease. In this case there was no active delirium, no spots and no retraction of head.

Case 5, girl nine years of age. Had a cold, the mother said, for a few days. Doctor was called March 22d. I saw the child about two hours after. Girl had been very restless and delirious, but at that time was verging on coma with some rigidity of muscle, especially of neck. That was about the time that diphtheria antitoxin was first being talked about for this disease, and we decided to use it; so four thousand units were injected. Four hours afterward the attending physician found a marked improvement. The mind had cleared up, and the child appeared in every way to be very much better. The antitoxin was used four times, twelve thousand units being given in all, I think, each injection being followed by an amelioration of the symptoms. But in spite of all she would have relapses or exacerbations of the trouble, until finally she died, thirty days from the beginning of the attack. The antitoxin was not used in such heroic doses as is recommended by those who have the greatest faith in it, nor was lumbar puncture done, which is also advised in conjunction with the antitoxin, and which is probably a more important factor than the latter in arresting the disease.

Case 6 I did not see. Boy about seventeen, strong and healthy. Worked in key shop. Was taken sick about April 17th. Symptoms severe from start, some headache and active delirium. Marked herpetic eruption, but no petechia. Antitoxin was used, but the boy died in four days.

Two of these cases worked in the key shop, as did also the father of one of the children. It spread great consternation among some of the employees, but I doubt if there was any connection between the shop and the cases.

In conclusion, I will say that I do not take a pessimistic view of the situation, but have faith in this case, as it has in many others, rise to the occasion and point a way out of the darkness, that we may not stand back humiliated and helpless before the dread disease. And the fact that the disease is still unconquered should be an impetus to each for still more untiring work and searching investigation.

LACERATIONS OF THE PARTURIENT CANAL THEIR PREVENTION IMMEDIATE TREATMENT.*

Norton R. Hotchkiss, M. D., New Haven.

It is not the purpose of this paper to institute new thoughts or ideas on this subject, but its intention is to emphasize the necessity of the proper observance of all injuries to which the parturient canal is subjected. We have undoubtedly reached the position in modern methods of asepsis and technique where it should be a disgrace to the obstetrician of to-day to leave many lacerated cervixes and perineal to the after care of the gynecist, to say nothing of the almost permanent invalidism of the patient, not only as to the pelvic organs and generative canal, but also to the one great bane of all physicians, the nervous and neurasthenic conditions of these patients, despite all the success gained in a reparative way by later operations. An inspection of a great many cases repaired by the gynecist will show perfect union and function of the perineum and uterus, but still a train of nervous symptoms follow. We have only to revert to the fact that before these cases met with injuries in their parturition they were healthy and normal individuals as respecting their nervous history.

So it becomes a duty which is more and more necessary that the obstetrician of to-day should be at least skilled enough in his profession to intelligently care for these cases. Indeed, it becomes a matter of serious import as to whether the ordinary midwife, as licensed by our State Boards, is perfectly qualified to attend to this particular phase of obstetrical delivery. One might say that it is all right for the midwife to attend a case so long as she is able to intelligently detect the presence of these injuries so as to call upon a surgeon to repair them. As a matter of fact, how many of these midwives do detect injuries? How many cases are surgeons called upon to repair immediately? It is my impression that very few of these cases are attended immediately by surgeons. It is only after the train of symptoms begins to develop that they reach the hands of the surgeon.

While the licensed midwife comes in for a share of the responsibility in these cases, it is still worse to find that a great many reach the surgeon that were attended by reputable doctors, and apparently without any knowledge on the part of the patient or even the doctor an injury occurred at delivery. Inquiry will often elicit from these patients the information that the attending physician did not even examine them after the delivery; how, then, can he state that his patient went through a successful parturition?

*Read before the Connecticut State Medical Society.

A consideration of lacerations of the cervix uteri often, and in fact with very few exceptions, can be laid to injudicious care on the part of the attending physician. Fortunately one of the acts of nature permits of a sufficient amount of elasticity of the cervix so that rarely an abrasion occurs, if let alone. It is to the credit of the midwives that few injuries to the cervix result, for the plain reason that they let it alone. On the other hand, the doctor, to hurry up the process of delivery, either by the use of drugs, or by mechanical interference in too early rupturing of membranes, or by manual and irregular dilatation of the cervix, or by the use of forceps before dilatation is complete, becomes the injudicious factor in the production of a great many cervical tears. If this first stage of labor is protracted and tiresome to the patient, it would be far better to give an anodyne for rest to the patient, than to use the hurrying process, because the same slow influence at work in the first stage will only be exaggerated in the second stage. On the other hand, a great many deliveries can be shortened and their services can be aided in the process of dilatation by a gentle stretching rotatory manipulation with the index finger, or possibly with two fingers. If a condition of a soft dilatable cervix does not exist, it is far better to leave the process to nature. Later, as dilatation is almost but not quite complete, as the occiput engages in the superior strait, it is often recommended by authors to push up the rim of the cervix over the occiput. This is the writer's opinion is one, if not the prime factor in small cervical tears; it is so frequently forced up over the engaging occiput that a tear is bound to result. Here again a gentle rotatory dilatation with the finger will assist without forcing the stretching at one point to ride over the occiput. Emphasis can not be put too strongly on the fact that forceps should never be put on until dilatation is complete, for the reason that each blade of the forceps in a high forceps application stretches the cervix unevenly. A little stream of blood will often establish the fact that a cervical tear has occurred even before the first strong traction has been made; still the obstetrician is not content to wait, but pulls and pulls on his forceps until not dilatation but tear enough has been produced to permit the head to escape the cervix. Afterwards the doctors contents himself with the thought that "it was a hard instrumental delivery, and something must tear in these cases," when in reality it was his injudicious and untimely use of the forceps.

Granting that a tear of the cervix has occurred, opinions differ as to the advisability of repair. Some even go so far as to state that successful primary union rarely occurs. The fault usually lies with the technique; first,

improper apposition of the torn edges, and second, on account of the relaxed and usually oedematous condition of the cervix the stitches are placed so loosely that union does not take place.

Every torn cervix that can be detected easily with the fingers should receive surgical treatment at once. There is only one contra-indication, and that is hemorrhage with its resulting shock; but even this condition may have righted itself within twenty-four or thirty-six hours, when even then it is proper to repair the cervix. It, however, the hemorrhage should be from the cervical artery, then it becomes absolutely necessary to at once ligate or stitch, or both, as necessary. Repair of cervix is best done in the dorsal position, with the hips over the edge of the bed, the legs flexed and held by assistants, not necessarily trained. A perineal retractor is usually necessary. Tenacula placed in both lips of the cervix, and drawing down will usually stop all uterine bleeding. Two or three stitches in each tear is usually all that is necessary. An anesthetic is usually not necessary—in fact the patient hardly ever feels the pain of a cervical stitch. Chromicized catgut is to be preferred, but the stitches must be tied tightly on account of the usual oedematous condition of the cervix. Ten to fifteen minutes is all that is necessary.

If union does not result, you have had at least the satisfaction of having made the attempt, which is in itself a great satisfaction to the patient in case she later has to resort to the help of the gynecologist.

Usually after the completion of the third stage of labor an examination will reveal a widely dilated, flabby cervix, which, if properly moulded together, would aid in the primary union of small tears not deep enough to be stitched.

A great many of the principles applied to the proper management of the first stage of labor, applies as well to the management of the second stage or the perineal delivery; but here we find that the physician in this case exercises a limitation in a degree if not entirely a prevention of perineal tears, while the licensed midwife increases her ratio of injuries by lack of proper care. The older writers told us that we should "support the perineum." No statement ever made was more erroneous than this, if applied as was literally meant in their teachings. As a matter of fact the maxim should have been "delay the head." The continued pressure of the hand on the already stretched perineum would only tend to further rip the tissues. Here again we have a fundamental principle of patience.

It is the experience of the writer that it is far safer to the perineum to deliver the child with the patient lying well over on her left side, with the knees fairly well

flexed against the abdomen and supported either by the pillow or the hand of an assistant. In this position the head can be delayed more easily until such time as the perineum can be safely stretched to permit of the exit of the child. Certainly in this position rectal cleanliness, antiseptic bathing of the vulva, perineum, and rectal region can be carried on more safely and successfully than in the dorsal position. The writer has not used the dorsal position in any delivery for the past six or seven hundred cases, except in breech-delivery.

Fortunately nature again permits a satisfactory dilatation of the perineum if allowed to do so slowly. The frequent bathing with hot antiseptic solution aids in this. Frequently it happens that the head remains on the perineum when it only requires a slight effort to deliver. It is frequently advised at this stage to insert the index finger in the rectum to aid in the expulsion. The writer mentions this procedure only to condemn it, first, because of the danger of infection (for that finger will not again get properly cleansed before the completion of the third stage); second, because it is absolutely unnecessary, for there is no case in which, with the patient on the side, it is not possible to gently push back the perineum over the head with less danger to the perineum; and thirdly, because this procedure in itself only tightens the girdle more and makes tearing more imminent.

There are certain cases where the attendant is absolutely certain that there will be a perineal tear; in such cases, it is the practice of the writer when the head is emerging during a contraction of the uterus, to insinuate one blade of a pair of straight scissors between the head and the perineum, and, cutting such amount of perineum as is necessary, to conclude the delivery. This incision is made in the median line and not on the sides or sulci as suggested by some authors in the operation of episiotomy. It becomes a surprise at times to see what a small amount of cutting is necessary to deliver the head, it never becoming necessary to cut through the sphincter muscles, but only including skin, fascia and mucous membrane. By this method you have an absolutely clean unragged surface with the certainty of being able to approximate the edges. The writer has adopted this procedure in a great many cases, and has yet to see one that did not perfectly heal by first intention.

The lateral operation of episiotomy is not to be desired for the reason you make two incisions, and that you are more liable to cut through the transverse perineum muscles and other important structures you are desirous of saving.

The same principle is adapted to forceps deliveries—always in the side position, with the precaution of always removing both

blades of the forceps before the final extraction of the head.

If, however, a laceration has occurred, it becomes only a question of the proper apportion of the torn area, trimming ragged edges and especially uniting with buried catgut the torn ends of the sphincter muscles if they be contracted, which is usually the case. If the rectum is involved the stitches should be placed deeply to include the sphincter muscle, and closely enough placed so as not to leave a dead space in any part of the laceration. The rectum itself should be united from within its calibre by cat gut sutures, which only include its mucous membrane.

Any suture material may be used for the vaginal or perineal laceration; chromic or plain catgut if a running suture, or silk-worm gut if interrupted are preferred. If the laceration is not deep, perfect union will follow ordinary cat gut; silk is used by some with entire satisfaction. The left lateral position is always employed by the writer for suturing.

The after treatment of these cases is of prime importance. The rectum should never be permitted to become packed, for the pressure of fecal masses would seriously interfere with deep union. The bowels should be opened on the following day by some laxative, preferably a saline, and should be kept loose or liquid until complete union. Stitches may be removed in from six to ten days. It is not necessary to catheterize such patients, but irrigation, preferably of a creolin solution poured from a pitcher while the patient is in a dorsal position on a bed pan should immediately follow each act of urination. If stitch infection should show itself, the earlier the stitches are removed and surfaces cleansed the better, for even then there is a chance of permanent union.

One word should be said in a general way with reference to the immediate preparation of a patient for delivery, and that is that the rectum should always be emptied by enemas before delivery. This is very frequently neglected by nurses, and thus constant soiling takes place. At any rate, if it has not been done before delivery, it should be done afterwards, and before any repairs of lacerations are made.

UNDIAGNOSABLE BLOOD DISORDERS.

By Dr. W. T. Marrs, Peoria Heights, Ill.

Within the past year I have had three cases in my practice over which I have puzzled my brains many hours. The condition was apparently the same in all three of them, yet the local manifestations were entirely different. My greatest difficulty has been to find a name for the disorder, and I have not yet succeeded.

My principal reason for thinking that it was the same disease in all three of the cases is that the appearance of the patients was remarkably alike, and the general symptoms were practically identical. Furthermore, the patients were akin to one another. The family have sufficient means to live well; I know that their food is well cooked, and of good quality and quantity; yet they are nearly all thin, anemic people. My three patients, especially, had pasty, muddy complexions, were evidently poorly nourished, and were always languid and listless. Their intelligence is decidedly above the average, and although the men are all engaged in mercantile pursuits of one kind or another, they are all fond of books, and are of a serious, reflective turn of mind.

During my professional acquaintance with the family I have examined several of them with greater or less thoroughness, and my three regular patients I have gone over many times with the utmost care.

Besides the characteristics mentioned above I found that their spleens were all more or less enlarged, and that there was a general enlargement of nearly all the glands of the body. These things point to a diseased state known as the "status lymphaticus," fortunately rather a rare condition, but the other symptoms described as belonging to that state were lacking.

The blood of all of my patients was much below the normal in strength, as shown by the paleness in the lips and the inner surface of the eyelids. A microscopic examination revealed the fact that the red corpuscles were few in number and pale in color. Also, there was a large proportion of them of small size and distorted and deformed in various ways.

From time to time I have questioned various members of the family to see if I could make out any history of syphilis, but without the slightest result. There have been two or three of a former generation who died of consumption, and there is one member of the younger generation who is afflicted with the same disease, so that the family weakness may have originated to some extent from this cause; but there are definite symptoms of scrofula in only one of my patients.

There is another reason why I think that all three of these patients suffered from the same disorder, and that is that the same medication relieved them all. This is no proof, of course, for the same remedy may cure many diseases, but it is an interesting coincidence. The remedy used was iodine, a combination of several vegetable alteratives with the iodide of potassium. I shall relate the three cases in detail.

Case 1. George A., age 12. This was the first of the family whom I was called upon to treat. He had a sore on the lower third

of his leg, over the shin bone. It seemed a very simple affair, but the family told me that it had lasted for six months, and that two physicians had treated it in vain. Thereupon I made a thorough examination of the patient, as mentioned above.

Such ulcers are of very frequent occurrence, but are usually found in people of middle age, and those whose occupation compels them to remain standing for many hours every day. I treated it locally first with wet dressings which were mildly antiseptic. The formation of pus was reduced to almost nothing, but there was no tendency toward healing. Then I tried balsams of various kinds. These stimulated granulation to a small extent, but when it had almost healed over it broke down again to as great an extent as before. This happened two or three times.

During all this time I had been giving the boy iron and strychnine in an attempt at building up his general condition. These did some good, but I saw that they were not really reaching the seat of the disease.

Then as a last resort I tried the iodide of potassium. After about week the sore began to heal. It was a slow process, but there seemed to be real progress, and I was beginning to hope that I had at last found the remedy. But at this point there came an unsurmountable obstacle; the patient's digestion, which had never been good, gave way entirely. His stomach could not stand the iodide. I tried to disguise the drug in various syrups and elixirs, but could not get him to retain a sufficient dose to do him any good. I had almost despaired of curing the case when I happened to think of another preparation which contained the iodide of potassium, namely Iodine. As this contains also powerful vegetable alteratives it was not necessary to give as large doses as of the iodide alone. These vegetable substances are also good stomachics, and the patient was able to take the remedy without any trouble.

From that time on his improvement was rapid; the ulcer healed promptly, and the boy's general condition became so much better that I had him continue the remedy in small doses for two months after the leg was entirely well. His blood was purified and strengthened, so that he took on flesh and began to grow rapidly, as if making up for his rather stunted growth of the previous year or two. All things considered it was a most interesting and instructive case.

Case 2. Miss B., age 20. She is a first cousin of the patient mentioned above. The condition here was more like scrofula than either of the others, for the glands in the neck were enlarged. She had had this trouble ever since she was a child. As a general thing the glands were merely swollen and hard, but gave her no pain. At ir-

regular intervals, however, one of them would become inflamed. Then it would swell greatly, become attached to the skin, and after a time break down into pus. If this was not lanced it would finally break through the skin and become a discharging fistula. These were very difficult to heal, and after they had done so would leave large, puckering scars which disfigured her neck.

When I was called to see her one of these glands had just begun to swell. Since she had the same general symptoms as her cousin I determined to try the same remedy which had cured him; so I put her on increasing doses of iodia. Locally I merely painted the spot with guaiacol to relieve the pain.

The inflammatory process was arrested and the gland began to shrink. At the same time I noticed that the glands all over her body were diminishing in size. At present, after four months treatment, it is only by careful examination that any glands can be felt. The patient has gained immensely in health and strength.

Case 3. Mrs. P., age 22. A sister to case 1. Her trouble was pimples and blotches on the face. Although it is well known that the iodides produce a form of acne I gave her iodia in small doses. For the first two weeks the eruption seemed to be getting worse, but had her continue it, and it was not long before improvement set in. Six weeks later, two months after beginning treatment, her face was entirely clean and smooth, and her complexion was much better.

THE THREE STAGES OF LABOR.*

By Wellington Johnson, M. D., Augusta, Me.

The writer will, for convenience sake, call the first stage from the time the labor begins until the external os is dilated to the size of a silver dollar, the second stage until the child is born, and the third stage the removal of placenta. It is not always easy to define where the first stage leaves off, and the second stage begins. However, we will try to make the several conditions plain.

In order to understand the first stage of labor, let us consider some of the forces entering into it, which are contraction and relaxation of uterine and abdominal muscles, together with the weight of the child and the bag of waters. The uterus is a muscular organ made up of muscle fibres, extending in a longitudinal manner, also circular muscle fibres around the os. When these fibres contract they tend to force the child down upon the internal os, and by so doing the internal os is forced open by the descent of the bag of waters and presenting part of the fetus. These muscular contractions are largely involuntary, but may be aided by the voluntary contractions of the

abdominal muscles. The amount of liquor amnii varies in amount in different partients, and may be in quantity from a pint to quarts. When in certain positions the force of gravity assists in dilatation of the os-uteri. The uterine muscle fibres are so arranged that they overlap one another in such a way as to make the muscle capable of exerting a tremendous force, when contractions are strong. These muscular contractions produce what is called labor pains. In the beginning of labor the patient has many aggravating or false pains, the true labor pains coming on when the child is well down in the pelvis. True labor pains are also called bearing down pains, because the patient strains and brings the diaphragm and abdominal muscles into action to aid the uterus in expelling the child. During the first stage the patient ought not, as a rule, to be confined to the bed until dilatation is well advanced. The pains are promoted by the patient moving about the room or sitting on the edge of a chair, a change of position being beneficial. The clothing should be loose and limited to a wrapper and underclothing. It is to be understood that strict surgical cleanliness is to be carried out in detail from the beginning until the ending of all obstetrical work.

If the first stage is slow, make a careful vaginal examination to ascertain the cause, noting whether the soft parts are tense or otherwise; whether the pelvis is normal or narrow; whether the os is dilated or dilat-able; whether the presenting part is large or small. All these things may be learned by an experienced obstetrician in less time than it takes to tell about it. Do not leave the patient until certain that she is all right and that labor may be prolonged. It is better taste on the part of the physician not to remain in the room during this stage.

Many times the membranes rupture and the liquor amnii escapes in whole or part, before labor really begins, constituting what is called a "dry birth." This condition of affairs is not desirable, because the bag of waters aid largely in dilating the cervix. Outside of this the fingers are the best dilators that are in use to-day.

In the second stage, so long as everything is progressing well, the duties of the obstetrician are few and simple. After dilatation is well advanced the patient should not leave the bed. The clothing should be well tucked up under the arms to prevent soiling. A folded sheet pinned around the body will further aid in cleanliness. The uterine expulsive efforts should be re-inforced by the voluntary muscles. Direct the patient to hold the breath and bear down with the pains. Most women during expulsive pains instinctively brace the feet and catch the hands of the nearest bystander, to assist the straining effort by pulling. To a certain

*Read before the Maine Medical Association.

extent this should be encouraged. Intelligent pressure may also be made over the abdomen and back to relieve the patient in her distress and to keep her steady for labor pains. When the bag of membranes does not rupture spontaneously by the time it reaches the pelvic floor, the obstetrician should rupture it, which may be done with a sharp finger nail or any blunt instrument. As a rule, the position of a patient should be left to herself—sitting on the edge of a bed or chair, and if lying down a change will aid in the propelling force. The most convenient position for all concerned is the left decubitus, or the patient may lie on her back. In either position the legs should be flexed upon the abdomen, and the chin resting upon the chest. When the child's head reaches the pelvic floor the perineum should be guarded by the obstetrician and if possible any injury to it prevented. If the pains are severe and the pelvic floor rigid, it is right to hold the head back and give the soft parts time to relax. The rate of descent is at the command of the obstetrician. At this stage, the action of the abdominal muscles may be involuntary and not under the control of the patient. An anesthetic aids in the control of the expulsive forces, and may prevent laceration. The head must be kept well up under the pelvic arch, and only allowed to pass in the intermission of pains. From the time the presenting part reaches the pelvic floor great care and watchfulness should be observed, no hesitation being had in exposing the parts, if it makes any difference to the welfare of the patient. It will take from fifteen minutes to an hour for the head to be born after it presents itself at the floor of the pelvis.

The moment the head is born the index finger should be inserted at once into the vagina to see if the cord is around the neck, and if so it must be drawn fold by fold and slipped over the baby's head. If this can not be done, tie in two places and cut. In delivering the trunk let one shoulder pass at a time, taking the one in advance, usually the lower one. There is no hurry about ligating the cord; in fact it is better to wait a few minutes unless something abnormal presents itself; but owing to certain conditions of the mother it may be necessary to tie the cord immediately. The best rule to guide us is to tie the cord as soon as pulsation has ceased and respiration is established. In case of twins the cord should be ligated in two places; in fact, it is the safest thing to do in every case, and then we may not fear hemorrhage from the cord. A suitable material for ligating is narrow linen bobbin, or twisted silk, and they must be surgically clean. It is best to leave one or two inches from the navel, tying the cord one-half inch from the cutaneous line. Pinch the cord before tying. After tying, hold the

cord in the hand and cut between ligatures with a pair of clean scissors, and wrap the stump in absorbent cotton, linen, or apply a starch dressing.

The third or placenta stage: Much depend upon the skillful management of this stage, as regards the immediate safety and recovery of the patient. Hemorrhage may be mentioned as one of the dangers, hence the uterus should be made to retract and contract until it is firm and hard on pressure. It should be guarded by the hand and pressure made upon it as soon as the head is born. If the placenta does not come away in a few minutes the uterus should be gently kneaded with one hand while slight traction is made on the cord with the other hand.

If the placenta will not come away seize the fundus of the uterus through the abdominal walls, and holding it firmly in the left hand pass the finger or fingers of the right hand in behind the placenta and force it out into the vagina, withdrawing the hand with it, gathering it up and giving it a twisting motion as it leaves the vagina. Examine the placenta and membranes carefully to see if complete. Be sure the uterus is well contracted before leaving your patient. Ergot may be given after the placenta is removed. After the child is delivered and cared for, and the placenta removed, the mother should be carefully washed with some antiseptic solution, bichloride, 1 to 1000, being preferable, and if hand or instrument have been introduced into vagina or uterus, wash out either of them with the same kind of solution.

As soon as the washing is completed apply pads, if patient has them, or napkins wet with alcohol, to the pudenda. Before doing this the soft parts should be examined carefully, to ascertain whether there is any laceration of them. If no tears are found, apply the abdominal binder or swathe, being careful to have it well down over the hips and no wrinkles in it.

Sometimes mothers do not want to nurse the baby, or can not for certain reasons. It is then well to apply a bandage to the breasts for comfort, and also to hinder the milk from coming in so great abundance. Some soft firm cloth is selected and pinned over tightly around the part of the body from the armpits to the lower border of the seventh or eighth ribs. This should be re-applied daily and the breasts bathed in camphorated oil. Emergencies may arise, such as eclampsia and post partum hemorrhage. In cases of the latter large doses of ergot or ergotine may be given, the foot of the bed raised, and the uterus seized in both hands, brisk kneading being done all the time. If these methods do not check hemorrhage, wet a soft cloth or handkerchief with table vinegar, and, with the left hand on the abdominal wall to steady the uterus, pass the

wet cloth with the right hand into the uterus and mop over every part of it with the vinegar cloth; or the abdomen may be slapped with a wet towel, pieces of ice inserted into the uterus, and alcohol applied to the abdomen. All lacerated cases must be treated surgically. Repair at once, using in most cases cat gut sutures. All cases of perineal repair should be catheterized until the parts are healed.

TORPID LIVER.

By Dr. S. C. Brown, Scio, Oregon.

This is a condition which we frequently encounter, and it is often accompanied by a state of congestion, or a sense of fullness, in the organ. Whether there is really a congestion or not is hard to say, as the liver is swollen, however, it is probably true; but at any rate it does not produce an increased amount of secretion, as one would naturally imagine would occur if this were the case. It may be comparable to a congestion of the lungs, which we know often occurs without any secretion or expectoration. While the liver is in this state its functions are almost entirely suppressed; there is very little bile produced. This gives rise to many and varied symptoms.

The most obvious one is constipation, for one of the functions of the bile is to stimulate the mucous coat of the intestine and thus promote the peristaltic action. There is poor digestion, for although the bile does nothing very directly to aid this function, it is known to help the pancreatic juice in the emulsification of the fats; it also precipitates the proteoses and the pepsin of the stomach contents as soon as they are poured into the duodenum; thus preparing them for the action of the pancreatic and intestinal juices. The bile is, moreover, a mild but sufficient antiseptic, and prevents the fermentation of food in the alimentary canal. For lack of bile, therefore, we have very imperfect digestion of the food and fermentation in the intestines, with the formation of gas, accompanied by pain and nausea.

A case which I recently treated illustrates these points very well.

Mrs. K., age 38. Was taken with severe bilious attack. The symptoms were as follows: Her appetite was poor, and she had a foul bitter taste in her mouth. There was constant nausea, with occasional vomiting; her bowels were constipated, the skin was dry and yellow, and there was pain in the back and limbs. The temperature varied between one and four degrees above normal.

I prescribed the usual antipyretics to keep the fever under control, and from the very beginning gave chionia in full doses. This immediately relieved the congestion of the liver, and the bile began to flow freely.

There was no violent purging, but two or three full actions of the bowels daily. This function being re-established, all other symptoms of the disease rapidly diminished in intensity, and soon disappeared. The appetite and digestion became normal, and in a short time the patient was restored to perfect health.

She continued to take the chionia for two weeks, but as there was no further trouble of any kind it was then discontinued.

THE CARE OF THE FEEBLE-MINDED.

By Bigelow T. Sanborn, M. D., Augusta, Me.*

In all the civilized and christianized countries of the world it has for a long period been the settled policies of governments to regard the insane as wards of the State. In England for more than five hundred years the government has recognized the peculiar dependence of those bereft of their reason, and that further restrictions in methods of treatment should be accorded to those suffering from mental disease, and so from time to time in many countries additional safeguards through statutory enactment have gradually eliminated town and county care, and the strong arm of government has made State supervision not only available, but mandatory. The peculiar phenomena manifested in mental disease, the utter inability to care for one's self and the exhibition of the loss of the power of self-control have no doubt been potent factors and largely contributed to these wise provisions of the governments. While methods for proper care in the earlier days were crude, yet little by little as diseased mental states have been more carefully investigated and better understood, rapid progress in the technique placed in operation for more scientific treatment has been inaugurated and the environments are being more and more studied in their adaptation to the individual patient, so that to-day such strides have been made and such efficiency attained it would seem that scientific investigation can do little more than what has already been accomplished in providing for the insane, except in the necessity of continued restriction carried on under existing methods.

While the philanthropist has labored so indefatigably and legislative bodies have been so liberal in their appropriations for the amelioration of the insane, there is another class equally as dependent, and because of these peculiar defects of mental and physical organization are essentially as worthy of our most careful consideration and efforts in the direction of extending such charity as shall contribute to enlightened care. I refer to the feeble-minded. I

* Read before the Maine Medical Association.

am aware that much is being accomplished in providing institutional treatment for this class by many of the States, but there are others, including Maine, that have not as yet extended that protection which is in keeping with the present enlightened and scientific methods of treatment. In fact, it might as well be announced that our State has not as yet put forth any concerted or tangible effort for the proper care of this defective class in its entirety. It is true that for some years past an appropriation has been made by our legislative bodies to extend care to a limited number of patients each year at the Massachusetts Institution for the Feeble-minded at Waverly, but the demand is so urgent, coming directly from the citizens of the Commonwealth of Massachusetts, that only a limited number can be accommodated from this State, and it is fair to predict that in the near future the management of the Massachusetts School will be obliged to withdraw that courtesy which in the past has been extended to its sister State, in order to protect and provide for its own. Chapter 1, section 8, of the Revised Statutes of Maine reads as follows: The words "insane person" may include an idiot, non compos, lunatic, or distracted person; but in reference to idiotic or non compos persons this rule does not apply to chapter 143 of the Revised Statutes, the latter having reference to the chapter which provides the laws governing commitments to the two Insane Hospitals of the State.

Notwithstanding this implied interdiction, the management of the Institution for the Insane at Augusta has consented to receive from time to time through commitment by the municipal officers, a limited number of this defective class where the power of self-control had become abolished, and cases where in consequence of homicidal delusions the subject had become a menace to the immediate family and community. Our statutory enactments are such, however, that this class are obliged to give place to the treatment of the more definitely insane, so that not infrequently the municipalities of the State have become embarrassed in being obliged to withdraw its idiots, imbeciles and feeble-minded from the Institution.

The experience of the management of the two Hospitals for the Insane of this State is that in common with the vast majority of the institutions of like character throughout the country, in that the capacity of both are taxed to their limit. There has scarcely occurred a year during the past two decades when the Hospital at Augusta has not been obliged, when applications have been made, to request the municipal officers to defer committal until room can be made available by the discharge of some patient who has recovered or improved to such an extent that the withdrawal of such a patient will

not endanger the peace and safety of the community.

By reference to the United States census it will be found that at the period of its enumeration in 1890 there were 1,299 insane of both sexes living within the borders of the State. The compilation at the same date shows 1,591 feeble-minded. The legitimate capacity of both hospitals for the insane is 800, and assuming that the two institutions are placed under moral obligations to provide for the latter where delusions of a homicidal character have supervened and the lives of the family and community are jeopardized, the absolute inability will at once become apparent, for the two institutions with a capacity of 800 to continue to meet the pressing demands which will be constantly made, growing out of the necessities for treatment of a large percentage of 1,299 insane and 1,591 feeble-minded. Indeed, if the management of the two institutions take advantage of the strict letter of the statutes and refuse to render assistance to this defective class, even then, according to the census of 1890, there were 500 more insane in the State, notwithstanding recently increased accommodations, than can be provided for; so that in seizing either horn of the dilemma we are placed under embarrassment.

The writer has been unable as yet to obtain from the Bureau of the United States Census the statistics of 1900 relative to the insane and feeble-minded and has been informed recently that they will not be ready for distribution for several months at least. It is fair to presume, however, inasmuch as there was a slow but gradual increase in the population of the State during the decade between 1890 and 1900 that these two defective classes have increased in numbers rather than diminished, especially when we take into consideration the large influx of laborers from Canada and foreigners from continental Europe.

If there were no objections, and no incompatibility existed in the treatment of the insane and the feeble-minded together, if the trend of enlightened investigation which has been prosecuted so studiously by indefatigable students of psychiatry during the past two decades did not oppose such procedure, if educated public sentiment did not interdict it, then the provisions as at present inaugurated are totally inadequate to carry out the demands for treatment. In using the term "feeble-minded," lest there be some misunderstanding by the laity in relation to what the term implies, it is perhaps proper I should state at this juncture that it is intended to include a group of three classes; namely, the idiot, the imbecile and the feeble-minded. The abnormalities observed in this defective group arise largely as the result of hereditary transmission, which influences an arrest of development either in

embryo or during the physiological, physical and mental stages in the growth of a child, or defective metabolism may play an important part, so that pathological changes are the result. The brain centers with its existing cells and molecules, which are designed to contribute to the building up of both body and mind, being diseased, are unable to perform their intended functions and hence we begin to observe dwarfed conditions either in physical or mental development or both combined. As a consequence of these degenerative processes set up in the child's life, we are able as a result to diagnose three quite distinct grades. First, the idiot who is deprived of all higher mental power, and whose ability to acquire is exceedingly limited if not absolutely abolished; second, the imbecile, who is capable of acquiring to some extent, but whose grasp of mind is hedged in by quite serious limitations; and third, the feeble-minded whose judgment is defective and in whom these limitations are the result of the same degenerative processes which gave rise to the idiot and the imbecile.

The term feeble-minded is a relative phrase, and I think it is quite generally construed to correspond to the definition which I have given to the third grade of the group, but in its application to the subject under discussion it should receive the most liberal construction, and the urgent necessities to provide proper care, which demand the action of our legislative bodies, should apply not only to the feeble-minded, but to the idiot and imbecile as well, and the strong arm of the State should extend its protection to the absolutely helpless as well as to those suffering from slight mental enfeeblement, that class whom it is reasonable to expect will receive such benefit which is the prerogative of a school for the feeble-minded to extend, or shall afford the patient an opportunity to return to a life of usefulness and productiveness. There is unquestionably a general sentiment existing throughout the State that the time is ripe when legislative action should be taken to provide a school for this defective class. To those who have given personal attention to the matter and have taken pains to investigate into the individual condition of the feeble-minded of the State, a settled and well-grounded conviction has become established that the extending of State care is one of absolute necessity and that steps should be taken at once by legislative enactment to eliminate this class from undesirable home care and almshouses and place them under institutional treatment, where proper environments can be afforded and opportunities for improvement and in some cases recovery may be established. The efforts of the various women's organizations of this

city at the last legislative session, supplemented by additional labors in other sections of the State in presenting the necessities of this object to the legislative committee having in its keeping the State beneficiaries, have not only voiced the sentiment of the general public, but have, and still are, collecting data of such a character as will, when presented to the committee of the incoming Legislature, go far in convincing its members of the urgent necessity of immediate legislative action. The legislative hearing so impressed that body that a sub-committee was appointed to fully investigate the subject during the interim and to report its conclusions to the next Legislature. While the writer was unable to attend a recent session of this committee at Falmouth, yet from the extended reports in the daily papers I am sure the meeting was attended with good results. I trust the various women's organizations of the State, impressed as they are that steps should be taken at once to ameliorate the condition of this unfortunate class, will continue in active labor in this direction until such a general sentiment shall be established throughout the entire border of the State as shall make legislative action certain.

When public funds are diverted from the usual channel for eleemosynary purposes, notwithstanding such procedures directly enhance the well-being of the individual recipient and the general public as well, yet, because of the fact that such appropriations are paid from the public treasury and indirectly by the tax-payer, there is likely to arise much opposition and contention, even where the object is admitted to be a worthy one. The reasons generally adduced are that a depletion of the public funds for a specific or unusual object, however worthy of consideration, will so far cripple its finances that prudence should dictate further delay. It is admitted that it is wise to guard public expenditures, and a legislative body would be derelict in its duty to its constituents should there arise an appearance of non-interference and non-interest in scrupulously guarding the finances of the people. yet in contributing to the object under discussion can the State afford to withhold its aid? Eliminating from this contention humanitarian obligations, even then we make bold the assertion, without fear of criticism, that in the end the establishment of a school and home for the feeble-minded will contribute to the material welfare of the State. The Good Shepherd left the ninety and nine and sought the lost sheep. The same disposition is exemplified in the family, and the one dependent members often commands the physical resources of the entire family. Productiveness is at a standstill, and as a consequence just so much of the result arising

from labor is withdrawn, not only from the family, but the community as well.

Because of such conditions, indirectly the State suffers, inasmuch as it is deprived of the labor-earning capacity of families comprised in these homes, who, in its application to our citizens, are caring for the 1,591 feeble-minded that now remain under such environments.

The removal of this defective class from the immediate home, to be placed under State supervision, will not only relieve fathers and mothers, brothers and sisters, from a peculiar burden almost insurmountable in character, which is in many instances a secret known only to the sacred precincts of the family, yet such withdrawal will allow freedom of activities and production, which will, it is self-evident, more than counterbalance in financial considerations to the town and the State the maintenance of this unfortunate class in a public institution. Who can measure the pecuniary loss sustained by the individual, and indirectly the public, occasioned by the inability to become active and productive citizens because of the imposed duty and the absolute necessity enjoined, in protecting and attempting to care for its unfortunate and diseased members? It would seem that no argument need to be adduced, when the status of the feeble-minded of this State is considered in all of its bearings, to convince one of the necessity of relieving the families of this "skeleton in the closet."

We have discussed its financial bearings and it is proper that such should be well considered, but there are vastly higher motives which should control one's opinion bearing upon the advisability of making radical changes in the care of the feeble-minded. Its social aspects should not be lost sight of if we are to remain a vigorous and intellectual people. If increasing civilization is to continue its onward march and we are to attain to even higher standards of moral and intellectual prosperity, we should see to it that such measures are inaugurated as shall make it impossible for the propagation of this weakened and degenerative humanity, which if allowed to continue will stunt and dwarf manhood, and physical and moral decline will be the inevitable result. Sentiments of philanthropy and the dictates of humanity call for radical changes. Christianity sanctions it. Our duty as citizens is plain. The enlightened trend of increasing civilization and the benevolence of an intelligent and appreciative public and legislative body, will, I have no doubt, when the matter is laid before them in all its important bearings, take into consideration the necessity of immediate action, and will see to it that such wise provisions are made as will conduce to the well-being of this class which is in so much need of

institutional treatment. Such a procedure would not only redound to the credit of the citizens of the State, but, a consideration which is of far more importance, will ameliorate the condition of the feeble minded and afford opportunities for improvements. The families throughout the State who are so seriously handicapped and burdened by such objectionable and dangerous members of the household should be relieved. "Salus populi suprema est lex."

ABSTRACTS AND SELECTIONS.

THE EXCRETION OF SUGAR IN THE URINE IN PNEUMONIA.

Rosenberger (*Deutsche Med. Woch.*) describes two cases of lobar pneumonia in which small quantities of a reducing substance were temporarily excreted. In the one instance the patient being a boy of six years, it appeared that the condition was one of maltosuria, but in the other case, which was that of a woman of twenty-six years, the author was unable to arrive at a satisfactory conclusion in regard to the nature of the sugar. He suggests for the cause of this symptom that the pancreas in these cases may be the seat of a parenchymatous degeneration, such as is commonly observed in other organs in the course of the acute infectious diseases. He considers that in the infectious diseases carbohydrates may be excreted in the urine, usually during only a short period of time and in small amounts, and independently of the diet, the body temperature, or the course of the disease. Neither the amount nor the specific gravity of the urine suggests their presence, and it is not unlikely that it may often be overlooked. The prognosis of glycosuria of this sort does not appear to be bad, and the symptom usually disappears of itself without being affected by the further course of the infectious disease. A tendency to the excretion of glycuronic acid or sugar after carbohydrate feeding may persist. Both of the author's patients recovered completely.

PATHOLOGICAL CONDITIONS FOUND IN THE CASE OF AN INDIVIDUAL WHO HAD SUFFERED FROM DEAFNESS DURING LIFE.

Gray (*British Medical Journal*) mentions the case of an individual from whom the temporal bones were removed post mortem had suffered from almost absolute deafness and very severe tinnitus for a period of seventeen years before her death, at the age of seventy-one.

The patient died from malignant disease

of the uterus, and in addition to the conditions relative to the cancerous affection the following were noted in regard to the anatomical changes found in the temporal bone and the adjacent structures.

The bones of the skull were remarkably soft, and the saw went through the calvarium almost as if the bones were of the consistency of hard cheese. The greater part of the temporal bone was almost soft in character, and the dense, ivory-like capsule of the labyrinth was much reduced in thickness. The mucous membrane of the tympanum and Eustachian tube was normal throughout. The malleo-incudal joint was ankylosed on the right side but not on the left. On both sides the stapes was completely ankylosed in the oval window, the ankylosis being bony throughout.

In the left membranous labyrinth the changes in the bony capsule were found to have produced distortions in the two limbs of the posterior canal by encroaching on its lumen. The cochlear branch of the auditory nerve was atrophied at least in the two upper turns of the cochlea. The ligamentum spirale appeared to be of a less dense nature than normal, though this may have been due to old age and not to the disease.

In the right membranous labyrinth there was found to be no actual distortion. The ligamentum spirale was atrophied, as was also the cochlear branch of the nerve. There were two masses of calcareous deposits, one in the common limb of the posterior and superior canals and the other in the posterior limb of the horizontal canal.

OPERATION OF FREYER FOLLOWED BY AUTOPSY.

Loumeau (*Ann. des Bal. des Orig. urine*) reports the case of an old prostatic who died three days after he had performed a prostatectomy by the method of Freyer, and upon whom he had the privilege of holding an autopsy. There was a cystic adeno-myoma of the prostate with a predominance of the muscular element. This muscular predominance and the manner of distribution of this tissue in each prostatic lobe gave a certain consistency which rendered it impossible to enucleate the hypertrophied gland either in separate lobes, or in small nodules. All the tissues were extremely united, thus making it necessary to extirpate the gland in one piece, the urethro-prostatic mass coming away as a whole leaving, however, small islands of the gland behind. In this procedure the internal sphincter and the prostatic urethra were removed as far forward as the veru montanum, the ejaculatory ducts being torn across. There was no sign of any infiltration of urine from the prostatic wound. It well shows the perfect drainage of the

prostatic cavity through the method of Freyer, and that the perineal drainage of Fuller is not as indispensable as one would a priori think it.

Taking up the discussion between Fuller and Freyer as to the claims of priority, the author cedes the American the credit of having originated the operation and accredits Freyer with having modified it in an important manner, that is, in having instituted the special vesico-hypogastric drainage, and thinks the procedure should be designated the operation of Fuller-Freyer. It seems that after supra-pubic prostatectomy the prostatic cavity is reformed in two different manners according to whether it is a subtotal prostatectomy with preservation of the prostatic urethra or a total prostatectomy comprising the gland and prostatic canal. In the first case, the walls of the prostatic urethra spread out until they become in relation with the wall of the prostatic cavity, forming somewhat of a funnel, the bowl of which is at the vesical neck and the narrow part continuous with the membranous sphincter of the urethra.

In the second case, the bladder and the prostatic cavity form together a cavity in the form of a reversed gourd, the large part corresponding to the bladder and the interior or smaller part to the prostatic region. In both cases the prostatic cavity is made a part of the vesical reservoir. In the latter case, the physiological neck is transported to the membranous sphincter, which is indeed the true sphincter of the bladder, and the integrity of which is indispensable to continuance after prostatectomy. It appears that the prostatic region is recovered by mucous membrane which is continuous with that of the bladder. The author has had two deaths in eleven operations after this method.

APPLICATION OF SALICYLATE SPIRITUS IN SCARLET FEVER AND CEREBROSPINAL MENINGITIS.

Solt (*St. Petersburg Medicinische Wochenschrift*) recommends the administration of throat compresses saturated with a two per cent. solution of salicylate spiritus in scarlatinal diphtheria. Fifty cases, mostly complicated with large swellings of the throat glands, were treated; no suppuration occurred, and the swelling usually disappeared in a week. Two cases of cerebrospinal meningitis recovered after the external application of these moist poultices. The alcoholic action upon the skin produces dilatation of the blood vessels and hyperemia of the covered part, thus facilitating the absorption of the salicylic acid. Local treatment of a few cases of peritonitis, pleurisy, acne and snake bite brought forth the same good results.

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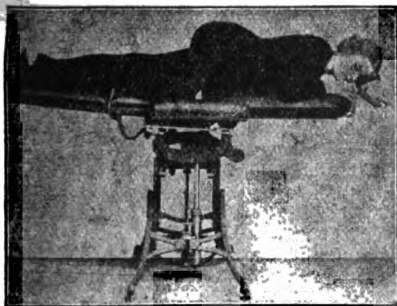
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climate, these are therapeutic measures often of more value than any drug. Fresh air, sunshine and wholesome food are, and will continue to be, the best tonics. A physician needs judgment, sympathy, enthusiasm, tact, hopefulness and unlimited patience as well as technical knowledge.

Although the physician of to-day has many helps outside of drugs, there never was a time in the history of medicine when he had so much help from drugs as at present. Chemistry has given us such drugs as salicylic acid, phenacetin and cocaine for the relief of pain, and the powerful hypnotics which make it possible to induce sleep without danger of opium habitation. Drugs, then, even though not directly curative, are often of great service in relieving distress and combatting symptoms which would retard or prevent recovery, and often the wise physician has saved a life by allaying a dangerous symptom, even though he could not strike at the root of the disease. This symptomatic treatment, based upon pharmacology, is the rational therapeutics of to-day.

This view as to the limited scope of direct cure has always been held by the men in the van of medical progress. Ambrose Pare, born in 1590, uttered the words still seen over his professor's chair in a French school of medicine, "I dressed the wound, God healed it"; and Dr. Jackson, an influential Boston teacher of a generation ago, never allowed his house physician to write the word "cured" when a patient was discharged, but instead the word "well."

We no longer believe a public calamity, such as a flood or cyclone, to be the result of the last comet, neither do we attribute changes in the weather to the moon. "Post hoc, ergo propter hoc" theories do not go with the clear-headed doctor of to-day. A direct connection between cause and effect must be shown to make it acceptable.

Nothnagel has said that practical efficiency at the bedside goes parallel with the cultivation of scientific methods, and history has proved this beyond question. We should try to keep in touch with the men who are building up the future of prophylactic and curative medicine.

There is only one science of medicine, only one physiology, one chemistry, one pharmacology, one kind of truth. In any age there is so much that is proved and no more; that was true in Harvey's time and is true to-day. Hundreds of elaborate theories will not alter one scientific truth.

This should decide our attitude towards osteopathy, Christian Science and kindred delusions. What have they ever added to the sum total of proved scientific truth? Has osteopathy discovered anything new in anatomy or physiology, or has Christian Science proved any psychological fact not

known before the days of Mrs. Eddy? These faddists take up some one idea that may or may not contain a truth and build upon it curative laws without being able to prove them. However well educated they may be they can not be in the line of scientific progress, because they can accept nothing that is contrary to their one idea of medical law. A true scientist will accept any truth from any source, provided it can be scientifically demonstrated. This is the foundation upon which Pasteur, Virchow, Helmholtz, Schmiedelberg, Paget, Bilroth and Gross have builded their scientific discoveries.

It is a mistake to say that the theories of these faddists have not been investigated with scientific care, and wherever a vestige of truth has been found in any system of medicine it has been freely granted.

The medical delusions of the laity should be viewed with extreme tolerance. While babies are teething they have diarrhea frequently, therefore teething causes diarrhea. Mr. Smith put on a red flannel shirt and his rheumatism disappeared, therefore red flannel cures rheumatism. These are innocent theories, the result of ignorance, and can do little harm, but when Mrs. Bowser attempts to cure Tommy's diphtheria with an infusion of odic force we know her downfall is at hand and need say little about it. The wilder and more senseless the vagary, the more transient it will be. Such things have always existed and always will till scientific enlightenment becomes generally diffused. Let us then take as our motto the scripture text, "Prove all things, hold fast that which is good."

DISEASES OF THE BLOOD VESSELS.

The blood vessels of the human body are subject to the same disorders which attack other tissues. There are inflammations of several kinds, and due to many causes; their course may be acute or chronic, and the results are as various as the causes. The cells of these structures are subject to three or four kinds of degeneration. As the walls of the blood vessels are themselves supplied with blood, there are troubles arising from derangement of this function. The nervous control of the blood vessels is very complex, and thus liable to many disturbances. The quality of the blood influences them to a considerable extent and the variations in its pressure keep them on a constant strain.

The principal causes which give rise to inflammations of the blood vessels are poisons in the blood. The best known of these are the products of bacterial life; we may take typhoid fever for an example. In this disease we frequently find the typhoid bacilli free in the blood, and they probably live and multiply there. They give off quan-

titles of a very virulent poison. It is this substance which causes the fever, delirium and most of the other general symptoms of the disease. Even if the germs are not free in the blood, their poison is absorbed into it from the tissues where the germs live, and the result is the same.

Inflammation of the lining of an artery or vein may cause the blood to clot in it, thus totally stopping its flow. This is seen in the swelling of the thigh known as milk-leg. Later on, when the clot breaks up, particles of it may be lodged in the capillaries of the lungs or the brain, causing serious and even fatal complications.

There are many other germs besides typhoid which may get into the blood and cause trouble of this kind, the streptococcus family are very dangerous; the staphylococcus is not quite so bad, but is more frequently met with.

The germ of a disease which is usually diagnosed as rheumatism is responsible for most of the inflammations inside the heart. The disease gives the same symptoms as the commoner form of rheumatism—that is, pain and swelling of one or more joints, with fever and sweating. The heart troubles which follow it are due to a distortion of the valves of the heart by a slow inflammation, with the deposit in many instances of chalky matter. The arteries and veins are also somewhat affected by the same germ. The muscle of the heart and the pericardial sac are frequently involved.

The so-called gonorrheal rheumatism is a disease of much the same character, the poison of the germ causing intense inflammation of the lining of the joints, and often of the lining of the blood vessels also. The poisons from pneumonia, meningitis and many other diseases act in the same way.

There is another class of poisons generated in the body itself, which are of much more importance than those above mentioned. They belong to a class of chemical substances, the best known of which is uric acid. In a normal state of health these are gotten rid of through the kidneys, principally in the form of urates. There are some conditions of the body, however, in which they are not properly changed into these soluble urates, and are not so easily disposed of. They then accumulate in the blood and give rise to the multitude of affections which are said to be due to the uric acid diathesis. The chemistry of these processes is not yet fully learned, so that physicians must still work largely on empirical lines; but many able men are at work on the problem, and we have reason to hope that in the near future we may be able to give reasons for the treatment which we now know by experience to relieve the symptoms.

These substances, which are of the uric

acid class, are very irritating to the walls of the blood vessels, and many chronic inflammations can be traced to their presence.

Ordinary fatty degeneration of the walls of the arteries is of common occurrence; it is usually a sequel of chronic inflammation. It is seen in the form of yellowish spots on the inside of the vessel. This results in a dangerous weakening of the walls. If a vessel in this condition be submitted to sudden great pressure, as during violent palpitation of the heart, or as the result of lifting or straining in any way, the wall of the vessel may be ruptured. The results of such a rupture depend upon the position and size of the vessel. If it is a small one, in some muscular part, the consequences may not be serious. When a large vessel breaks it may cause great trouble. The bursting of the principal artery of a limb is often followed by gangrene of the parts beyond it; if it is in the lung, the patient may be choked to death by his own blood; if in the abdomen, he sometimes bleeds to death, and the bursting of a vessel in the brain often causes paralysis and sometimes sudden death from injury to the brain substance.

One of these weakened vessels may not burst outright, but be gradually expanded on one side like a bubble. This is called an aneurism; it becomes progressively thinner and eventually breaks. Many measures have been proposed for their cure, but they are not very satisfactory. When they are in a portion which can be reached, they may be remedied by surgical means.

A very common and also a very stubborn disease of the capillaries is a gradual degeneration of their walls, which so weakens them that the serum, or liquid portion of the blood, is allowed to filter through them. This escapes into the tissues too fast for the lymphatic vessels to take it up. This serum generally clots and forms a doughy mass, which is cool to the touch and can be easily dented by the finger. It is this condition which we call anasarca, or dropsy of the limbs, and with the ordinary treatments it is difficult to cure. When the fluid escapes into the abdominal cavity it is called ascites, or dropsy of the abdomen. Here it rarely clots completely, but contains flakes of clot floating in it. This fluid can be let out by tapping, but it usually returns, and the operation is not entirely without danger.

There is a powerful drug on the market which was devised to meet this condition. It seems to have the special faculty of restoring the tone of the vessel walls; it is also a mild but sufficient stimulant to the heart. Under its administration the anasarca and ascites gradually disappear; the fluid is absorbed into the blood and eliminated through

the kidneys. These latter organs are stimulated by the drug to increased activity. On account of its properties the drug has been named anasarcin.

During the past few years this preparation has been used in many thousands of cases, and there has been much evidence accumulated to show that besides the relief of the various forms of dropsy its tonic effects are useful in nearly all diseases of the circulatory system. Cases of cirrhosis of the liver are greatly relieved, and hearts which are crippled by valvular disease are enabled to take on a sufficient hypertrophy to restore their complete function.

ATTITUDE OF THE PROFESSION TOWARDS THE THERAPEUTICS OF THE ROENTGEN RAY.

When members of the medical profession who have demonstrated the value of the X-ray write in an apologetic spirit, seeming to fear lest they be termed enthusiasts or incur disfavor from the surgical members of the profession, it is time that such writers be considered in their true light. It is a notable fact that there are several prominent members of the medical profession who are now earnestly advocating the use of the X-ray, who a few years ago wrote in the same apologetic manner, fearing lest they might be looked upon as standing in a ludicrous aspect before the wise men of the profession.

The time is past, says the editor of *Advanced Therapeutics*, if there ever was such a time, when those who have proved its value need stand back and display timidity lest those who differed because of ignorance or prejudice are induced to ridicule them. Adverse criticism of facts so well established as the therapeutic indication and value of the X-ray are certain to bring not those who employ them, but the critics, and those who ignore them into disrepute, and the physician who writes displaying fear of the possibilities of such criticisms, places himself in a very ridiculous position.

The most ardent advocates of the Roentgen ray do not believe that it has proved an infallible cure of all cases of malignant disease, but few fail to accord it a place approaching a specific in the treatment of most cases of epithelioma, lupus, tubercular glands, acne vulgaris, and a large number of other superficial conditions.

Nor can it be denied that the X-ray plays a most important role in conjunction with surgery, or other procedures, associated with the treatment of all malignant processes. The surgeon who fails to recognize the importance of its effect, and does not accord it a place in connection with his

operative procedures, is no friend to his patient, or willing to give her every chance of restoration. The time is near at hand when the force of this truth must be recognized by all, and when to ignore any measure that would contribute to further the successful issue, must be looked upon as inexcusable negligence.

MEDICAL GLEANINGS.

Frequently one may cure nervous disturbance by giving antiseptics to arrest putrefaction in the intestine.—Brunton.

For bleeding, after tooth extraction, dampen a small ball of cotton and roll it in pulverized burned alum, and plug the socket with it.

A thorough rubbing with *hamamelis virg.* will do much to relieve the soreness following an attack of rheumatism or the stiffness resulting from violent muscular action.

A pleasant custom of some specialists is to parade specimens of tumors, or other things, for the edification of the clients:

If you do not feel well and look upon yourself as in a bad way, it is doubtless due to some prostatic trouble. If you don't believe it, consult a genito-urinary surgeon.

L. D. Dickerson in the *Missouri Medical Monthly* says that in summer complaint intestinal antiseptics and antiferments are of doubtful utility; but clears up the mystery by adding that of these bismuth is his choice. If that is his best we scarcely wonder.

Once established, neurasthenia tends to persist indefinitely, and only some radical change in the mode of life serving to relieve the patient of worry and work is likely to favorably moderate the condition.

A five per cent. solution of iodine in ether is used by Isambert in the treatment of open, suppurating surfaces. He fills the abscess cavity or ulcer with this solution and finds that after the ether has evaporated the wall is covered with a thick layer of pure iodine. One application is ordinarily sufficient. The same treatment is adapted to chronic fistulas. If preferred a ten per cent iodine petrolatum may be substituted, or gauze soaked in a ten per cent. solution in ether and the cavity filled with this.

In removing the stitches from an abdominal wound Dr. J. C. Sexton holds that the stitches should not be removed when cut because of the liability of infecting the wound and causing the patient pain and some discomfort, but after the stitches are cut the wound should be dressed again with the stitches in place, and at the end of two or three days the stitches will have freed

themselves from the wound and will be lying free in the dressing when removed.

W. S. Hall discusses the relation of alcohol to living protoplasm, pointing out that it is a normal product of metabolism of the yeast fungus; that it belongs to the class of substances that are completely metabolized and is passed out because its existence is destructive to the living cell; in short, that it is an excretion toxic to the organism that produces it. An excretion of this type is also toxic to higher organisms, and this is the case with alcohol. Admitting that it is oxidized in the liver and produces heat and that it may lead to decrease in the catabolism of carbonaceous foods, the heat produced is not a normal catabolism, but is simply the result of a protective oxidation, which is insufficient, the toxic action showing in its narcotic effects. The decreased catabolism of carbonaceous and nitrogenous foods following the ingestion of a narcotic is a universal fact depending on the drug effect and giving to the oxidized narcotic no significance as a food. It may be said, he says, without reservation that ethyl alcohol is not a food in the scientific significance of the word.

An eye bath fashioned from a single piece of aluminum has been introduced by the Kress & Owen Company. That this little device will be well received by the medical profession is not to be questioned, when one considers the many points of advantage this

metal cup has over the old style glass contrivance.

INTESTINAL TREATMENT OF GONORRHEA.

It is a well-established principle in medicine, and one to which there are few exceptions, that when two or more remedies are useful in a certain disease a combination of them all will act better than a correspondingly large dose of any one of them. This is not hard to understand, for it is rare that any two drugs act in exactly the same way, or on exactly the same organs or cells.

For example, take the purgatives. Any one of them when given in sufficient dose will cause an evacuation of the bowels, but they act on various portions of the alimentary tract. Some cause an increased flow of bile, some increase the peristaltic movement, some act on the glands of the small intestine and others on those of the large intestine. For a gentle and thorough cleansing of the whole tract, a combination of all of these actions is the most efficacious.

It is the same in the internal treatment of gonorrhea. The standard remedies are the oils and oleoresins. Their action is similar, but not identical, hence several of them together are much more efficient than any single one. Acting on this principle, there has been prepared a capsule containing copaiba, cubeba and santal oil; to these is added a little salol for its sterilizing effect on the urine. The combination forms the best internal treatment for gonorrhea. It can be given from the beginning of a case, and is especially useful in the later stages and in chronic cases. The name given to this combination is taken from the initial letters of the drugs composing it, namely, C. C. and S. S. capsules.

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A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 316.
New Series Vol. XIV, No. 187.

New Albany, Ind., April, 1907.

\$1.00 PER ANNUM.
SINGLE COPIES, 20 Cts.

ORIGINAL.

REPORT OF A CASE OF FOUND CELL SARCOMA OF TONGUE TONSILS AND PART OF SOFT PALATE.*

By St. Clair Spruill, M. D., Baltimore, Md.

The condition from which this man was suffering, round-cell sarcoma of the tongue, is sufficiently rare to justify my bringing this patient before you. Only thirty-six cases are recorded in literature of sarcoma of tongue, with or without operation; seven of this number were treated with total extirpation of tongue with but one recovery. I wish to indicate briefly some of the most important points in making a diagnosis, and to describe the technique of the operative treatment.

Diagnosis.—The clinical diagnosis of sarcoma of tongue is extremely difficult. It is most frequently mistaken for gummata, less rarely for tuberculosis and actino-mycosis. When ulceration takes place, the clinical picture is very similar to that presented by gummata.

They should be differentiated by the history of onset and evolution of the disease, and the use of anti-syphilitic treatment.

Sarcoma of the tongue usually occurs between the ages of forty and fifty, occasionally prior to these limits. Metastasis is the exception, rather than the rule. The superficial epithelium usually remains intact, unless the tumor grows very rapidly, then it ulcerates, becoming crater-like in shape. The growth is generally soft and not well differentiated from the surrounding tissues. The pain resembles that of carcinoma, radiating to all parts supplied with sensation by the fifth nerve, especially to the ear and temporal regions, being conducted by the lingual nerve, and from it to the other branches of the inferior maxillary nerve, especially the auriculo-temporal. Possibly pain in the ear may be due to the implication of the fibers of the glosso-pharyngeal nerve, which by tympanic branch is conducted to the tympanic plexus.

Gummata, on the other hand, may occur at any age, and are usually seen at the tip or margin of the tongue. They may be multiple or single, generally painless, ulcerate early if untreated, having a base covered with a tough secretion, which can be removed without causing bleeding, while in sarcoma the ulcerated base bleeds freely upon manipulation.

With the clinical history, anti-syphilitic treatment and microscopical examination of a section of the growth, there should be no doubt as to the proper diagnosis.

Treatment.—The treatment should be thorough and complete, as sarcoma of the tongue presents no feature different from sarcoma in other parts of the body. I can not understand why there should be any difference in the treatment when located in the tongue, from that of sarcoma of the breast or elsewhere. If we operate and fail to remove entire growth, it is sure to return to this location as in any other.

When the growth is located at the base of the tongue, it is best to extirpate the whole tongue together with submaxillary, sublingual and nearest lymphatic glands, and all affected surrounding tissue.

The procedures for the excision of the tongue are many; it may be removed through the unaltered mouth; through an incision in the neck; through the mouth after splitting the cheek, or temporarily dividing the inferior maxilla; and after excision of the inferior maxilla.

The choice of the operation should be influenced by the extent of the disease. I selected Kocher's operation.

Case.—Mr. McC., age 40, was admitted to the University Hospital on March 25, 1902, complaining of dryness in the mouth, pain, difficulty in swallowing and a tumor on the dorsum of the tongue. He first noticed this growth about two months before consulting his physician, Dr. Monroe. At this time it was very small. On admission to the hospital, I found a crater-like tumor about the size of a walnut at base of tongue, involving the right tonsil and soft palate, somewhat harder than the substance of the tongue, raised well above its surface, and slightly elevated at the top, and bleeding easily upon palpation.

The right submaxillary, sublingual and the

* Read before Medical Society of the State of North Carolina.

chain of glands along with the carotid artery, were found to be enlarged. A small section of the growth was removed for microscopical examination, and was returned from the pathological department with the diagnosis a round-cell sarcoma.

Operation.—April 4, 1902. Patient being anesthetized with chloroform and field of operation rendered aseptic an incision was made on the right side along the anterior border of the sterno-mastoid muscle, from the mastoid process to about the center of the muscle—thence transversely forward in the crease between the floor of the mouth and the neck to the hyoid bone—thence along the anterior belly of the diaphragm muscle to the symphysis menti. The skin and subcutaneous fascia being divided, the flap was turned back by dissection over the cheek. All enlarged glands from the upper end of the sterno-mastoid and from beneath the angle and body of the inferior maxilla were removed en masse. The submaxillary gland was dissected up, working from behind, and removed simultaneously with the cervical glands.

The sublingual gland was similarly removed. The facial artery and vein were tied, as soon as exposed in the process of raising the submaxillary gland.

The lingual artery was tied near its origin before passing under the hyoglossus muscle. The incision was continued on the left side from the one at symphysis to the border of sterno-mastoid, and the above step repeated on this side. The mylo-hyoid muscle was now exposed, and as far as necessary the mucous membrane cut close to and parallel with the inferior maxilla—and the mouth entered.

The tongue was now seized and drawn through the floor of mouth and wound in the neck. The jaw was held up by an assistant and the tongue removed with curved blunt scissors, together with the tonsils and soft palate.

The glands under and posterior to the sterno-mastoid on each side were removed through a second incision back of this muscle. Kocher always performs a tracheotomy before this operation. In this case it was not done, and only a few drops of blood were lost during the excision of the tongue.

The denuded surface was now swabbed over with chloride of zinc, 40 grains to the ounce, which prevents immediate sepsis by causing the wound to be covered with an inflammatory exudate. The cavity was packed with gauze and the flaps brought into place, leaving a small drain at the bottom of wound. Following the operation, the maximum temperature, 100 2-5 degrees, was on the second day.

Patient was discharged from the hospital April 24, 1902, in good condition, with no evidence of post-operative metastasis.

At the present time, three years and three months since the operation, patient is in good health, works daily, presents no sign of recurrence, and, I think, may reasonably be reported as the second recorded recovery of sarcoma of the tongue treated with total extirpation.

THE PHYSICIAN'S DUTY TO THE PEOPLE. *

By A. E. Grant, M. D., Durham, N. H.

It has been a most difficult task for me to decide upon a topic which I thought would be acceptable and worthy of the time of consideration by this august body, and one which would in any way advance our cause of usefulness, and bring to our minds more clearly our obligations as representatives of our noble profession.

I wish that I might be able at this time to present an infallible remedy for the cure of the many now incurable diseases, or recommend and describe in detail the technique of some yet unperformed surgical operation for the relief of suffering humanity.

Not being able to do this, it is a great comfort to realize that the relief of human suffering is not wholly accomplished by medicine and by the knife. Bringing to mind the topic, "The physician's duty to the people," it is safe to say that his principal duties are to prevent and relieve suffering in whatever way he may be able to do it.

One might think that his duty was wholly to relieve the suffering of the body as pain, but this is only one branch of his many duties. His administration of drugs, his manipulation with instruments are but a small part of what is required of him if he fulfills his whole duty to mankind.

It seems to me that one of the greatest obligations of the physician to the people is to be a teacher. One of the most potent factors in the relief of human suffering is by enlightening and educating the people so that they will refrain from doing those things which produce and augment suffering, and understand how to do those things that will relieve suffering. Not that the physician should enter into prolonged discussions of physiologic problems, or discuss diseases and treatments with the laity, but every physician has many opportunities to act as an instructor to the patient and his friends, and set their minds in the right direction upon subjects in which they show gross ignorance.

For instance, a few years ago a lady who is considered an intelligent woman came to my office and wished me to send some medicine to a friend of hers, whose child had whooping-cough, to "break it up," saying that Dr. A. some years ago had given her

* Read before the N. H. Medical Society.

something for her children to "break up" whooping-cough at the beginning of the disease.

This summer I was asked by a parent if I could not give something to prevent their child from taking the measles, as Dr. B., some years ago, said he could give something as a preventive. The number of cases of typhoid fever and pneumonia that have been "broken up," and the number of people who have visited the physician "just in time" to save their lives are truly wonderful.

Such statements as these from physicians to the people will never educate them very much, and is it any wonder that the laity are ignorant about these matters when a physician in whom they have confidence instructs them in that manner? Is it any wonder that there is a restless, unsettled, distrustful condition of mind among the people, and especially among patients who have chronic diseases and have gone the rounds, and "have suffered many things from many physicians," and been instructed differently by each one? While our schools and colleges are spreading general knowledge and education in a most admirable manner, yet there is a vacancy which no one but the honest physician can fill.

I believe the ignorance of the people of the present time and of ages past is, and has been, in a great measure due to the ignorance and untruthfulness of the physicians, and probably more to untruthfulness than to ignorance. Superstitious beliefs and fads have been inherited and handed down from generation to generation, and so inbred in the young of each succeeding generation that they seem to them like realities and truths. It is wonderful with what tenacity a certain proportion of people, in this enlightened age, in the midst of education and refinement, still cling to the old and superstitious beliefs of the past ages. By this I mean their faith in charms for good or evil for preventing and curing diseases, such as electric belts, eel skins and leather straps around the waist to cure kidney trouble and backache; brass rings around the finger and horse chestnut carried in the pocket to prevent rheumatism; skeins of flax around the body to prevent mumps from "turning down;" red strings around the neck to prevent nose-bleed; camphor and asafetida suspended from the neck to prevent infectious and contagious diseases; repeating certain magic words for the relief of pain. The howling of dogs at night under a patient's window, and the hooting of an owl, the tick of the "death watch" (an insect under the wall paper) are regarded as grave and sure precursors of death. The fear of certain days, as Friday, and certain dates and numbers, as thirteen and many other equally absurd things, Mental Healing, Christian Science, Dowie's Touch are fads of modern type. For

nearly all of these beliefs which the people entertain the physicians of olden times, were responsible. For it was through their ignorance or untruthfulness, and perhaps both, which first introduced many of these beliefs to the mind of the people as facts, or at least if the physicians did not introduce them to the people, they did nothing to dispel them from their minds.

The people of the present time who believe in these things do not understand how these charms work or why they produce such and such effects, but somehow, and in some mysterious unknown way, they believe in their mighty power; and as Lord Bacon said in regard to the "Weapon Ointment Cure," we must accept the facts and leave them unexplained. The people of past ages did not understand how the charms worked. The workings of the physicians and surgeons seemed to them like something supernatural. The instruments and medicines were a dazzling mystery in their eyes. The words of the physician were to them almost as sayings from the gods.

It was this false pretense on the part of physicians, this veil of mystery, which kept the people seeking for something that was more mysterious, and the quack in those days as at the present time, who could present the most dazzling mystery was the one most sought. It is wonderful what magic there is in mystery.

I believe the only way to suppress the curse of patent medicines, to starve and retire the quack from business, is to educate and instill good common sense into the minds of the laity, so that they can see for themselves that there is nothing supernatural about the practice of medicine and surgery. They should be taught that patent medicines are nothing but drugs secretly compounded, that superstitious beliefs and fads are entertained only by the ignorant and that they are false and have no power.

It is a fact that all will admit that our best patients, easiest to treat, are the ones who are the best informed. They are the ones who will call the physician first, they have the most confidence in him they consult the quacks least, and buy the least patent medicines. They do not expect a physician to leave half the medicine which he has in his case when he is called to visit them, and they are just as willing to pay if he leaves no medicine.

The time has fully come when the physicians should cease standing out as a wonder, as something almost supernatural, when his medicines, his instruments and his acts are shrouded with mystery. The sooner the people can be made to realize that the practice of medicine is a science, and based upon common sense and facts like any of the other arts, the sooner will they employ and appreciate the services of the honest physician.

The people have a right to expect the physician to be accurate in diagnosis, painstaking in prescribing, and to use every source of information that may be made useful in the cure of disease and the relief of human suffering and saving of human life; to be kind to the poor, sympathetic with the sick, courteous and honest to all men.

If every physician would try to eliminate from the minds of his patrons all that mystery and superstition which has clung to the average person since his childhood, and endeavor to influence and instruct the child so that correct ideas will be rooted in their minds in place of superstitions and fads and ignorant beliefs a greater change in the practice of medicine would take place in the next century than there has in the one just passed.

It is with the young that our efforts will be most effective. The young are the future makers and owners of this earth. Their physical, intellectual and moral condition will decide whether the world will advance in civilization and morality, or become more criminal and immoral. For their education and training and capabilities the physicians, as representatives of the medical science and art, and as teachers, should become responsible. It is in infancy and childhood, before the dangerous period of puberty sets in, that habit and character for good or evil are formed. It is at this period of life that they are most receptive to good instruction.

The physician's duties to the people are legion. He is concerned with the new individual before he is born, while he is being born, and after. The physician is called upon to assist in the regulation of labor laws, factory legislation, and the prohibition of marriages of epileptics, syphilitics and criminals. He is called upon to advise in the manufacture and distribution of food stuffs. His advice is sought in the construction of schoolhouses and public buildings, and in all hygienic and sanitary questions.

We have seen many exhaustive articles in our medical magazines recommending some legislation in regard to prohibiting marriages between epileptics, syphilitics and criminals, but thus far no legislation has been enacted in any States except Michigan and South Dakota with regard to the inebriate, whose condition is as much a disease as epilepsy or syphilis, and who is the father and mother of thousands of epileptics, idiots and criminals. A move in the right direction, however, has been taken by various temperance organizations in different localities by employing a competent physician whose duty it is to visit the schools and give instruction in regard to the effect of alcohol upon the human body, believing that it is through the children that this perplexing problem of intemperance is to be solved. And may the time be not far distant when there shall be

no such thing as intemperance or syphilis, and when there shall be no epileptics, idiots, or criminals, and when the people shall have replaced superstitious fads and ignorant beliefs with knowledge of truth, and shall have become so educated that they shall know the value of true professional services.

THE TREATMENT OF SMALLPOX.

By Dr. W. T. Marrs, Peoria Heights, Ill.

This disease is regarded with the greatest fear and dread by the public in general, and with good reason. There is probably no other disease which transforms a human being into such a loathsome object. With the face and hands greatly swollen and covered with scabs, the hair matted with pus, the eyes red, full of pus, and hardly to be found between the puffed lids—these make one of the most repulsive sights imaginable.

And when a patient recovers from a bad case his face is often terribly scarred and pitted. This is bad enough in a man, but a disaster to a woman.

As the disease usually occurs in epidemics the diagnosis is not often difficult; some mild cases, however, may go unrecognized.

Vaccination, as a rule, confers immunity, or if the disease is acquired it is of a mild variety. There has been a great deal of opposition to vaccination in some quarters, and some very sad accidents have occurred by the use of improper virus; but when systematic vaccination has been carried out on a large scale and watched intelligently its great benefit is seen to be beyond dispute.

During the first stages of the disease the severe pains in the back, limbs, and head are best relieved by morphine. These last for only a few days.

When the fever continues high a tepid bath or cold pack can be used to great benefit and without the slightest danger. If the patient goes into a stage of low, muttering delirium along with the fever, the best treatment is a sudden plunge into a bath of 70 degrees. This is severe treatment, but it wakes him up and gives him an interest in life.

The heart and lungs must be watched, and stimulants given when necessary. Of these strychnine is one of the best. Bad hemorrhagic cases (black smallpox) almost invariably die, and it is of no use to fill them with ergot and styptics.

The diet should be plain and nourishing, and the patient often has a remarkably good appetite and digestion.

One of the most essential features of the treatment is plenty of fresh air; treatment in tents is very successful.

The prevention of pitting has long been an unsolved problem, but in about a dozen

cases which I have treated I have been so fortunate as to have them come out "with a whole skin." The means of accomplishing this will be explained in the histories set forth below.

Case I.—Mrs. D., age 25. In the year 1903, I lived in Jewett, Ill., and in that year we had a great many cases of smallpox. The disease showed every degree of intensity from the mildest varioloid to the terrible hemorrhagic cases.

One very bad case was this Mrs. D.; hers was of the confluent type, the face, neck, scalp, hands and feet were covered with uninterrupted crusts, and her body was thickly studded with the sores. She was swollen to a third more than her normal size; it was a most loathsome spectacle. A particularly distressing feature was the fact that she had been a very beautiful woman, and it was pitiful to think of her being disfigured for life by the resultant scars.

The ordinary routine features of the treatment were carried on as outlined above. The lessening or prevention of the pitting was my great problem, for I knew that the patient would rather die than recover with her skin in the hideous condition we had a right to expect. My course of reasoning on the subject was as follows: (a) As it was a pustular process and as pus is always produced by bacteria, then a germicide was evidently needed; (b) as the surface was covered by crusts which it was not practicable to remove, and as the process was burrowing deeply into the true skin, we must use the germicide which had the greatest penetrating power; (c) to prevent the flakes and crusts from becoming dry and flying all over the neighborhood an ointment was indicated.

After a careful consideration of all the drugs with which I was acquainted I came to the conclusion that the only one which answered all of the requirements was ethol. I therefore had her husband procure a quantity, and we kept her covered with it from the top of her head to the soles of her feet. Over her face we fitted a mask of gauze soaked in the ethol, and tied it on well, so that she should be unable to scratch it. After anointing her hands and wrists we put on gloves.

It was useless to put on a night dress; she lay merely between sheets, a piece of oil cloth was placed beneath the lower sheet to protect the blanket. Once a day she was anointed with a fresh supply of the ethol, and a new mask and pair of gloves put on. We gave her a little ethol internally also, for its germicidal action is exerted on the blood as well as externally.

As her convalescence progressed we watched her skin most anxiously, and were immensely gratified to find that in the end

the disease had left hardly a single perceptible mark.

Case II. Miss Caroline Z., age 19. This case was similar to the one above cited, but was not quite so severe. Her face, however, was completely covered by the scabs, and the eruption was plentiful on her body. Being an unmarried woman it was particularly desirable that her former good looks be preserved.

Encouraged by the success I had had with Mrs. D., I began the use of ethol early and used it unsparingly.

The result was even better than in the first case; after the illness was over we were able to find only one or two small scars at the edge of her hair.

The general course of the cases in which I used ethol seemed to be less severe, and there is no doubt that its internal administration is of decided benefit.

Case III. Mr. George J., age 56. This case occurred in the same town and during the same epidemic with the others. He seemed to have some blood dyscrasia, or, at least a severe anemia; the suppuration was profuse and hard to control.

I gave him calomel and salts to begin with, and then kept him on ethol internally, as well as applying it freely to his skin.

His recovery was a little slow, but it was complete: there was practically no pitting. When he got about again he noticed that the rheumatism from which he had suffered for several years had left him. This I attribute to the ethol.

JAUNDICE (ICTERUS). *

By H. B. Schofield, M. D., Parkston, S. Dak.

Jaundice is a symptom and not a disease of itself. It is a condition characterized by coloration of the skin, mucous membranes, and fluids of the body by the bile-pigment. It may be due to a number of different causes and may give rise to other symptoms of greater or less gravity.

The General Causes of Jaundice.—There are four conceivable ways in which jaundice may be caused. (1) By obstruction to the outflow of the bile; (2) by the excessive formation of bile and its reabsorption in large quantities by the intestine; (3) by the rapid destruction of blood corpuscles and the liberation of coloring matter by the blood; (4) by the destruction or loss of functional activity of the hepatic cells, so that the elimination of coloring matter can not occur even though the amount be not excessive. "Murchison" has classified the causes of obstructive jaundice as follow:

(1) Obstruction by foreign bodies as gall stones, inspissated bile and parasites; (2) by

*Read before S. Dak. State Medical Association.

inflammatory tumefaction of the duodenum or the lining membrane of the duct; (3) by stricture or obliteration of the duct; (4) by tumors closing the orifice of the duct or growing in its interior; (5) by pressure of the duct from without as by tumors of the liver itself, of the stomach, pancreas, kidney or omentum; (6) by pressure of the large glands in the fissures of the liver, and, more rarely of abdominal aneurism, fecal accumulation or the pregnant uterus, and displaced kidney.

This being a broad subject and my time being limited to twenty minutes, I am obliged to abbreviate and will therefore take up catarrhal jaundice alone as it comes under the head of medicine.

Catarrhal Jaundice (Icterus Catarrhalis; Duodena-Cholangitis; Inflammation of the Common Bile-duct; Hepatogenous Jaundice)—**Definition:** A condition characterized by coloration of the skin, mucous membrane and fluids of the body by bile-pigment and resulting from a catarrhal inflammation of the lining membrane of the ducts, more especially the large end of the duodenum.

Pathology—On examining the liver and gall-bladder in situ, the former is usually found enlarged, lighter in color than normally, and of a distinct icteroid tint. On making longitudinal section, drops of bile can be collected on the edge of the section-knife. The gall-bladder is found distended with bile, and on firm pressure a tough plug of mucus is expelled from the common duct into the duodenum, after which bile flows into the intestine freely. The mucous lining of the ductus communis is swollen and inflamed, and the catarrhal process may extend to the cystic, and in some cases to the hepatic duct. As a rule, that portion of the common duct lying in the intestinal wall is more frequently and more deeply involved. If the disease becomes chronic, a formation of connective tissue occurs, owing to the irritation caused by the retained secretion, and atrophy of the liver-cells, with biliary cirrhosis, may result; suppuration is rare.

Toxic (hematogenous) jaundice has for its lesion extensive catarrh of the intra-hepatic bile ducts from their origin. Here duodenal catarrh is not necessary for the production of jaundice. It was formerly assumed that the pigment (hemoglobin) was liberated in the blood, but Stadleman and others have found that the bile containing the poison, or its irritant products (toxines), excite inflammation of the finer ducts.

Etiology—Simple catarrhal jaundice results in a majority of cases from extension of inflammation in gastro-duodenal catarrh, and the principal predisposing causes are as follows: (a) Exposure to cold and wet, (b) the use of improper foods, under which heading may also be comprised faulty cooking and improper mastication, (c) the ex-

cessive or prolonged use of irritants (tea, coffee, and alcohol), (d) prolonged anxiety and mental or physical overwork, (e) certain acute diseases, as pneumonia, relapsing fever, typhoid fever and malaria (toxic jaundice vide et supra), (f) portal obstruction, occurring in chronic heart or kidney disease, (g) more rarely it has occurred in epidemic form.

Symptoms—Preceding the attack by several days dyspeptic symptoms are in evidence. The principal symptoms in detail are: (a) Icterus may be the first symptom showing first on forehead and neck a lemon yellow and rapidly spreading over the body. The conjunctiva also early becomes discolored, and if it becomes chronic the color is apt to change to a bronze or deep green tint. Since the removal of the diffusible substance from the blood is chiefly by the kidneys, the urine contains more of the biliary coloring matter than any other secretion. The sweat is often found to contain bile-pigment; the patients' linen is frequently colored; in extreme cases the urine may be dark green in color, while in those of average severity it is of a lighter or deeper greenish yellow hue. The shaken specimen foams and the froth as a yellow color tint. Rhubarb and santonin, when administered, produce a similar color in the urine, but the froth is not yellow. Often the presence of bile is detected in urine before any noticeable coloring of the conjunctiva occurs. In cases of long standing or intense jaundice, albumen and tube casts may be present, and the latter may be bile stained. Hyaline casts are often found in cases of moderate intensity. In ordinary jaundice the color of both skin and urine are due to bilirubin. The bowels are constipated and the stool a pale drab or slate color. They are usually fetid and pasty. The clay color of stool is due to the undigested fat. Diarrhea, however, may be present, owing to the production of irritating substances and decomposition. The tears, saliva and milk are rarely stained. The expectoration also is rarely tinted, unless pneumonia or some form of pulmonary infiltration coexists.

Circulation—The pulse, although not appreciably altered in volume or tension, is usually slow (30 to 20 beats per minute), though this is not an unfavorable symptom. Respirations are usually normal, but may fall to ten or less per minute.

Temperature—The temperature is usually normal, though slight elevation may occur. In my cases there has usually been a rise for a time at least. Also secondary rise in severe cases.

Gastro-hepatic symptoms—Dyspeptic symptoms, viz., anorexia, a sense of fullness after eating, with flatulence, acrid eructations, nausea, and vomiting, accompanied by a heavy pain over liver and some tenderness

are present. In children we have: (1) The peevishness, headache, redness of face, dullness in eyes, an unnatural, ravenous appetite, stubborn constipation, nausea and vomiting, which is often extremely distressing. The vomiting is often flecked with blood, intense retching after stomach is empty. This condition is gradually relieved after the bowels move freely, and by allowing as nearly nothing taken into the stomach excepting hot water for a number of hours, as possible. This condition, with slight amelioration, may obtain for two or three or four days, or for two or three weeks, but more frequently from five to eight days. In these cases jaundice appears, as a rule, early and deepens more as the case is prolonged. There is something more terrible in this in children under six or seven years of age than is usually found in typhoid fever in children of the same age.

Cutaneous Phenomena—Pruritis or itching often becomes a troublesome symptom, being more frequent, however, in the chronic form cases. Lichen, urticaria, furuncles and sweating may develop, the latter often being limited to the skin covering the abdomen and palms of the hands. A peculiar disease of the skin called exanthelasma may also occur. It consists of bright yellow spots, slightly elevated, appearing on the eyelids and rarely on other parts of the body.

In the more severe forms, spots of ecchymosis, and in some instances profuse hemorrhages may occur into the skin and mucous membrane. These are usually associated with other symptoms of a grave type. The blood requires in some of these cases ten or twelve minutes to coagulate, instead of three or four in the normal state. Surgical operations in chronic obstructive jaundice should only be undertaken after due consideration of the change in the blood. William Osler reported three fatal cases of hemorrhage following operations under these conditions. He recommends a course of calcium chloride for ten days, in which the blood is deficient, before operation.

Nervous Symptoms—Headache and vertigo are common, irritability of temper, despondency and wakefulness, or mental dullness almost equally so. With the approach of darkness vision may become indistinct, or it may become unnaturally clear; rarely objects look yellow. The nervous phenomena observed in catarrhal jaundice are attributable to the effects of bile-acids. In certain cases associated with destruction of hepatic substances, as in acute yellow atrophy, carcinoma, cirrhosis and fatty degeneration, cerebral symptoms (acute delirium, convulsions and coma) may develop suddenly and prove fatal. Usually there is slight fever, rapid pulse, emaciation and mild delirium. From this typhoid state patient may become comatose and develop

convulsions and die. This was formerly denominated choleemia or cholesteroemia. The true nature of the toxic agent in the blood is unknown. In some fatal cases of this character death was due directly to renal complications.

The physical signs in a state of simple catarrhal jaundice show on palpation and percussion an increase in the hepatic area, the lower border in some instance projecting several fingers below the arch of the ribs. Rarely the gall-bladder projects below the border of the lower lobe of the liver, as where there is complete obstruction near the duodenum, and then it can be distinctly palpated.

Diagnosis—The etiology (errors in hygiene and diet), a history of previously existing gastro-intestinal catarrh, the age (childhood and young adult life) and the appearance of jaundice unaccompanied by pain or general emaciation, together with an absence of symptoms pointing to cirrhosis, carcinoma, or acute yellow atrophy, form a characteristic grouping of clinical symptoms.

Duration and Prognosis—Duration varies from two to eight weeks. If it continues longer than two months there is grave doubt about it being one of simple jaundice; the prognosis is guardedly favorable. Pepper says that a rise of temperature, with hemorrhages of skin and mucous membrane always influence the issue unfavorably.

Treatment—Diet and hygiene are the first consideration. Rich, highly seasoned foods and fats should be interdicted. Starchy foods, lean meat, soups (broth) and fresh vegetables may be used in moderation in mild cases, but in the more severe in children albumen water, barley or rice water diluted milk (skimmed) with strained meat juice, are about the only articles that can be retained, or at least without exciting an exacerbation of symptoms. Skimmed milk, buttermilk, and alkaline drinks (Vichy and Saratoga mineral) may be used freely when they do not excite nausea and vomiting or other objectionable symptoms; lemonade may be tried. Systematic bathing and regular hours of sleep exert a beneficial effect. The free use of pure water often is of great value.

The first therapeutic indication is to keep the bowels open with some saline aperient. Castor oil in dose large enough to sweep out the bowels thoroughly gives gratifying results when it can be retained by stomach. Calomel, rhubarb and calomel are also given in obstinate constipation. The alkalies, soda bicarb, sod, salicylate and phosphate, which tend to increase the flow of bile and render it less thick, are recommended.

Hydrochloric acid, with bitter tonics, as gentian or quassia nux., Ewald says aid digestion and prevent the formation and con-

sequently the absorption of toxic gases. Ammonium chloride and silver nitrate gr. 1-8—1-4 (thrice daily) prove beneficial.

Injectons of cold water 60 degrees to 70 degrees F. daily in quantities of one or two quarts are highly recommended as promoting the secretion of bile. Lavage practiced over a long period of time (one to two months) has proved highly beneficial when gastro-duodenal catarrh exists.

Itching is often a troublesome symptom. It may, as a rule, be relieved with simple remedies, as a solution of borax, soda bicarb. (oz., 8 to Oj) or menthol and alcohol (gr. x to zj.)

Flatulence—Careful regulation of diet will often prevent this, viz., by avoiding starches and sugars. Charcoal tablets bis. submit or salicylate and beto-naphthol are all useful. Also irrigation of colors with some antiseptic solution. Headache is caused by some toxic principle in the blood and may be relieved by the use of caffeine cet. camphor, monobromate and phenacetin (either alone or combined), if necessary to use anything except cold water. When the obstruction is due to mechanical causes the treatment is surgical.

ACUTE SEPTIC INFLAMMATION OF THE MOUTH AND THROAT.*

By Dr. J. A. Ellegood, M. D., Wilmington, Delaware.

Although the most severe forms of phlegmonous inflammation of the mouth and throat are comparatively rare, their gravity and high mortality, when they do occur, are so marked that the greater reason exists for a careful study of them to the end that improved methods may be found for their successful treatment. The oldest extant writings on medicine bear witness to the fact that septic inflammations were recognized at the date when man first made record of human ailments. They have occurred in all parts of the world, and at all seasons of the year, sparing neither age nor sex in their development. The same nature of disease, from an etiological and pathological standpoint, occurs in other parts of the body where it is commonly referred to as erysipelas. On account of the peculiar anatomical character of the parts under consideration, the proximity to the larynx, and the occurrence of the disease in mucous membranes, its clinical character is somewhat peculiar, and the prognosis often exceedingly grave.

Ludwig, of Stuttgart in 1838, so fully described a malignant type of phlegmonous inflammation of the cellular tissues of the throat and neck, that it has since been re-

ferred to as Ludwig's angina. The condition he described had evidently been recognized centuries before his classic description appeared, since the term *cynanche*—a name given because of the fancied resemblance to the manner in which a dog pants, mouth open and tongue out—was introduced by Aretaeus and Paulus Aegineta referred to an inflammation of the tissues about the trachea as *paracynanche*. While it is probable that many of the symptoms referred to as *cynanche* were caused by malignant types of such diseases as diphtheria and scarlatina, it is more than likely that they were frequently caused by the disease described by Ludwig. It consisted of an acute inflammation of the connective tissue of the submaxillary spaces secondary to an adenitis of this region, the original lesion being usually a carious tooth, a mucosal ulcer or a tonsillitis. The depth of the inflammation, the extreme pressure exerted on the exudate by unyielding deep fascia covering the space, and the liability to involvement of the neighboring organs, especially the larynx, gave the disease the character of a severe and frequently fatal infection. The gravity of the disease, and the fact that many text books on surgery do not refer to it at all, while those that do treat of it usually do so in a brief manner, seem to warrant presenting the picture drawn by him for whom the syndrome was named.

He says: "Among the prodromal symptoms usually observed in the rheumatic angina, and more frequently in the erysipelatous angina, are mild febrile movement, chills, headache, languor, anorexia, slightly coated tongue, and moderate pain in swallowing. In the disease under consideration there was, in addition, swelling, usually on one, occasionally on both sides, beginning in the connective tissue which surrounds the submaxillary gland, seldom occurring in that of the sublingual or parotid. This hard, infiltrated area then spreads, finally occupying the whole of the anterior and lateral cervical region as high as the chin, and not seldom posteriorly over the parotids, the affected area standing out prominently.

The entire connective tissue layers and even the muscles are involved. The tongue rest on a hard, intensely red floor, that portion immediately within the lower maxilla being converted into a hard ring. Movement of the jaws is difficult and painful. The tongue is forced upward and back, and speech is necessarily hindered, partly due to pressure on the larynx, and in part because of the involvement of the small muscles of the neck. The voice is harsh and guttural. For some time the skin does not present any sign of inflammation, and it is movable over the swelling, showing that it is free from the subjacent process. During

*Read before Medical Society of Delaware.

this local stage, about four to six days, the patient remains pretty comfortable, the fever is slight and the general condition is but little changed. Soon, however, the skin becomes reddened in one or more places, the sublingual swelling softens, as though half coagulated serum had formed under the mucous membrane. Spots of softening, at times accompanied by crepitation, appear in the swelling, occasioning fluctuating prominences, as though pus had formed. Such is not the case, however. About this time or a little later perhaps, an opening occurs in the floor of the mouth, either posterior or laterally, near the root of the tongue or more anteriorly at the inner side of the lower jaw, and from it pours a thin grayish or reddish-brown, stinking fluid, which more and more assumes the character of putrefactive destruction of a sphacelus. At this stage the general symptoms assume a more or less grave character. The fever is higher, with morning exacerbations; sleep is disturbed, profuse sweats and delirium set in, the typhoid state grows progressively more profound. Deglutition remains difficult, even though the swelling is rendered less tense by the softening process. The course of the disease is always extremely rapid, death resulting in ten or twelve days after the onset, from coma and paralysis of respiration." Ludwig mentions the fact that various degrees of severity may occasionally be met, but he presented a pronounced case the better to stamp the condition on one's mind, and thus facilitate recognition.

In those cases which had been posted he noticed the following: "The skin and immediate subjacent connective tissue were unaltered and not adherent to the swollen tissues, but separated from them by serum. The deeper lying connective tissues, however, and the muscles of the neck were the seat of putrefaction, being grayish or greenish in color, containing gas and extremely fetid material resembling beerwort in appearance. The salivary glands did not show any change except possibly a slightly more intense red color than normal. The periosteum of the lower jaw may be involved."

In speaking of the etiology of the condition, he suggests the possibility of its being erysipelas and submitted as an appellation "gangrenous induration of the neck." He sums up the diagnostic points thus: (1) The insignificant inflammation of the esophagus, which often ceases entirely after the first couple of days, and even when progressive, still remains very superficial; (2) the "wood like" induration of the swollen tissues, which do not pit on pressure; (3) the hard swelling in the floor of the mouth, with the sausage shaped induration just internal to the lower maxilla, with red or bluish color; (4) the fact that the indurated tis-

ues are sharply delineated, being immediately surrounded by uninvolved, normal connective tissues; (5) the insignificant affection, or more often the absolute noninvolvement of the glands, even though the swelling may apparently originate in or about the gland.

Symptoms: Ludwig's original paper was so explicit that little remains to be said except to call attention to the special features. In many of the cases the condition begins abruptly with inflammation about one, or less frequently both submaxillary glands, with a development of a more or less extensive swelling, which almost all of the writers from Ludwig's time to the present describe as a board like or even stony hardness, and upon which they agree as being characteristic. During the first few days the temperature is very little elevated and general disturbance is slight. With the formation of pus, or of gangrene in the most severe cases, the temperature mounts, and eventually a more or less profound typhoid condition supervenes.

In all probability the disease described by Ludwig does not represent, from an etiological standpoint, an individuality differing materially from other septic processes occurring about the mouth and pharynx, but one, the most malignant form of a group of acute septic infections of the throat and neck. In reality it represents nothing but an inflammation sometimes serous, sometimes purulent, sometimes gangrenous, of exactly the same nature as you see in a septic laryngitis or pharyngitis, the distinction being more of anatomical than of an etiological character. The question of primary development and localization, probably depends upon the seat of original infection, the gravity upon the localization, and the virulence of the infecting agent. According to Semon the more frequent class of grave cases begin in the pharynx with symptoms of an ordinary sore throat or tonsillitis. In the course of a few hours, the inflammation assumes a violent form and grave dysphagia, dyspnea, or both supervene. Simple congestion is followed by infiltration and considerable edema. A dark bluish discoloration is evidence that serious trouble is developing, and that the case is more than an ordinary sore throat. Dysphagia may pass into complete inability to swallow and is soon followed by hoarseness, aphonia and dyspnea, the latter quickly increases and death may speedily ensue from suffocation.

The infiltration may not be generally and equally distributed, but localized chiefly or entirely in certain parts of the larynx. In many severe cases the affection is not limited to the larynx, but extends to other parts, generally taking a downward direction and involving the mediastinum, lungs, pleura, pericardium and other serous membranes.

In the fatal cases in which death is not caused by interference with respiration it is often caused by the effect of the poison upon the central nervous system. It usually occurs on the third or fourth day and preceded by delirium, convulsions, coma, or heart failure. Not all cases, even of great severity, have a fatal termination. Cases presenting the most serious symptoms may be followed by retrogressive changes occurring almost as rapidly as the symptoms develop. In many of the cases that survive, the period of convalescence is long drawn out, and some permanent impairment of tissue often remains. While the above descriptions represent the graver forms of septic infections of these regions there are milder ones varying in degree from the slightest ulceration, and in intensity according to the stage of the inflammation, the virulence of the infecting organism and the resistance of the tissues. Any of these may be accompanied by ulceration, but the local and systemic symptoms are not so severe as in the septic form, in which the constitutional symptoms are out of proportion to the extent of the local disease.

Septic infection may follow upon any chemical or mechanical lesion of the mucous membrane, or glands of the mouth, the teeth, or alveolar processes. All these conditions favor the entrance of the virulent germs into the lymphatics. Entering the deeper tissues, the infecting bacteria obstruct the blood supply and cause further necrosis. According to the virulence of the infecting organism and the resistance of the tissues the disease may remain superficial or extend deeply. It may arise as an ulceration of any of the infectious fevers. The slightest ulceration, injury or operative wound may be followed by a severe septic infection. The process usually has its main seat in the subepithelial structure, and we have in most cases a comparatively mild form of cellulitis which though often showing a disposition to spread, may subside without having caused either extensive destruction of tissue or serious constitutional symptoms. Occasionally the inflammatory process may assume the circumscribed form and end in abscess. Although in some cases the severest types occur suddenly in persons apparently in the best of health—in which cases the atrium of invasion may not be determined—the majority of the most malignant forms follow, at a variable period, upon an appreciable lesion, and may be regarded as a traumatic infection. In the so-called Ludwig's angina the phlegmonous inflammation usually has its anatomical origin in the floor of the mouth. Whether the subhyoid or the sublingual regions is first or more involved, has no significance from an etiological standpoint. No selective action is displayed by the micro-

organism for either location, that being more or first involved according to its proximity to point of infection or the resistance offered by the disposition of the fascia to the spread of the disease. Whether or not those cases that occur as a complication of septic processes existing in distant parts of the body, or in infectious fevers, have their primary origin in a superficial lesion of the mouth or pharynx, or are to be ascribed to metastatic infection of the buccal or pharyngeal glands, has not been determined. It would seem probable that the former is more frequent, since the disease in question occurs more frequently as a complication of those fevers in which inflammation of the throat are most common. Among the predisposing causes may be mentioned age, sex, and occupation. Adult males and those exposed to noxious gases, cold and exposure are more frequently affected. Ludwig regarded the disease he described as infectious and the same view has been accepted by most subsequent writers upon the subject. Newcomb states that in regard to its primary form, no contention has been made on this point, but that as a sequel to the complication of infectious diseases, it has perhaps been observed more frequently with typhus fever than with any other malady.

Dele van expresses the opinion that its possible epidemic character can be explained by the simultaneous exposure of various patients to the same septic influence.

The day has passed when there is any longer a question as to the bacterial origin of septic infections. It must be confessed that our knowledge on this subject is decidedly incomplete. The consensus of opinion is that in the milder grades the streptococci and staphylococci are the offending agents, and that of these the former display the predominating influence in diffuse and the latter in circumscribed cellulitis. The severe forms are doubtless instances of mixed infection of the most complicated kind.

Semon in a recent lecture speaking of the bacteriology of these cases says: "All these septic infections are due to the action of various micro-organisms which either inhabit or may invade the human body. From an etiological standpoint we may divide these micro-organisms into two great classes—the one innocent, the other pathogenic. The pathogenic can and ought to be divided into two big groups, those which have a specific action and those which have an inflammatory effect.

"(The latter usually are called 'pyogenic,' but I do not think that this is a good name, because it induces you to believe that their effect is always to cause a purulent effusion. As this is by no means the case, the sooner that appellation goes out of medical terminology the better.)

"Of the specific bacteria there are a number, a few of the most important, of which are the bacilli of tuberculosis, of pest, of relapsing fever and diphtheria. Whenever these micro-organisms produce any effect, the effect is always one and the same. The tubercle bacillus does not produce tuberculosis in one case and a different disease in another. Whenever it shows its pernicious activity, it is always developing tuberculosis. The same law obtains in diphtheria and in the action of all other specific micro-organisms.

"Quite different from this class of specific pathogenic micro-organisms is the second class. Of these organisms, of which there are a large number, and the most prominent and representative of which is the streptococcus pyogenes, it may be truly said that they are "interchangeable" with one another, inasmuch as the action of all of them always has one and the same effect; they all produce inflammation. The inflammatory irritation caused by them primarily attacks the blood vessels; they become dilated; an alteration of their walls occurs; augmented transudation takes place; the increased permeability of the walls of the blood vessels allows leucocytes to emigrate, and this emigration (diapedesis) is the main symptom. It is not alone the streptococcus pyogenes which produces these effects. There are a host of other pathogenic bacteria which cause exactly the same result. There are the various forms of the staphylococcus, the albus, aureus, flavus and citreus, the bacterium coli, the pneumococcus bacillus, pyogenes fetidus, the tetragenous and the pyocaneus, not to mention others.

"These micro-organisms are "interchangeable" in the sense that not one of them produces one form of inflammation and another form of inflammation, but that they all may produce different forms of inflammation, according to their quantity, virulence and to the nature and condition of the tissues of the body they invade. In other words, there is no pathogenic organism which always produces a serous exudation, and none that always causes a purulent one. It is equally erroneous to believe that the erysipelatous form of inflammation is caused by a specific organism. We know now certainly by clinical experience, as well as by bacteriological experiment, that the streptococcus pyogenes and the streptococcus-erysipelatous are in reality one and the same organism and no specific pus-microbes exist, and that every one of the so-called "pyogenic" cocci proper is capable of producing apart from the purulent, all other forms of inflammation.

"There is no artificial difference to be made between two inflammations, because in one case you see a serous exudation and

in the other a purulent one. Nor need you have recourse to that expedient which has been used for many years, when there was in certain cases serous inflammation in one part and purulent inflammation in another part of the body, viz: That you have to speak of a "mixed" infection. From what I have told you you will have seen, that one and the same organism may produce in one part of the body a serous and in another part a purulent inflammation, or may cause in midst of a serous exudation purulent foci, that is to say circumscribed abscesses."

So far as terminology is concerned, no differentiation ought to be made on account of where the primary focus is located. We ought not to speak in one case of an "angina Ludovici," when the first symptom is an infiltration of the neck, and in another case of an "acute edema" or "abscess of the larynx" if you find the primary focus in the larynx, we ought not to speak of an "erysipelas of the pharynx" if the infection begins in the fauces. To illustrate what I mean I can not give you any better comparison than diphtheria. Diphtheria remains diphtheria, wherever we find it, whether it begins in the fauces, larynx, nostrils, eyelids, the bronchial tubes, the vulva, the rectum, or any wounded surface of the human body. Similarly any of these septic inflammations remains the same wherever by accident its first localization may be. That this usually is in the tonsils is easily explainable by the anatomical structure of the parts, because of the epithelial covering of these glands shows gaps large enough to allow of a transit of leucocytes, so that their crypts almost, so to say, invite pathogenic micro-organisms to make the tonsils their first habitat when invading the body. It is not only in these septic cases that the tonsils form the portal of entrance for infectious processes. In a good many cases, for instance, of tuberculosis of the lungs, we find at the post mortem examination latent foci of tuberculosis in the tonsils, though no actual tonsillar tuberculosis may have appeared during life. That diphtheria in the majority of all cases shows itself first in the tonsils is known to all of you. Similarly most of the septic processes, of which I speak, commence in the form of the apparently ordinary tonsillitis. But supposing that a person had a little abrasion on the neck, at the time when he was exposed to the action of any of these pathogenic organisms, they may of course invade his body from the outside and may cause what has hitherto been called an "angina Ludovici." The clinical phenomena of that old fashioned affection may be caused from within, if the infection should take place through a hollow tooth or through an abrasion in the floor of the mouth. Similarly, if there should be an epithelial abrasion on the patient's

tongue, the affection may begin as a glossitis, or if he should have an acute laryngeal catarrh, it may start as an edema of the larynx. In other words, the question where the disease is first located is purely accidental."

In this question of etiology, we have been discussing the seed only. The soil also has a great importance. The pathogenic micro-organisms which we have now to consider are practically ubiquitous in their nature. This being the case, it would seem remarkable that any one should escape the invasion. The reason must, in a great measure, be due to the condition of the soil. The seed is more or less constantly being sown, but healthy tissues nearly always destroy them. It is only when the attack is violent or prolonged that they succumb. A breach of continuity of the tissues or impairment of their vitality by general disease of malnutrition predisposes to the development of a soil favorable to invasion. Doubtless that little understood condition known as auto-intoxication is a notable factor in establishing conditions favorable to infection. It has been observed that the virulence of one species or kind or pathogenic bacteria may be increased or decreased by symbiosis—growing it with or in the presence of other microbes. Thus a germ ordinarily innocuous, or not in a position or condition to do so, may be directly or indirectly made an element of danger by being associated with another or other germs. This may explain in a measure why, in the most malignant types of septic infection, there is recognized what is called mixed or what may often more appropriately be called a multiple infection. The morbid anatomy and clinical features, other than those heretofore mentioned, will not be further considered here. They and the prognosis vary according to the anatomical region involved, and the extent and virulence of the causative factor.

The treatment of the conditions under consideration may be considered under three headings, general operative and special, or serum therapy. The general treatment can not be laid down on any hard, fast lines. Every case is more or less to be treated individually. Hot or cold applications, depletives or stimulants, astringents, antiseptics, etc., may be administered as in the judgment of the physician they may be required, or are applicable. The parts should be elevated and put as nearly as possible at rest. The usual analeptics, iron, quinine and strychnia are administered by the mouth, if possible, or by the rectum. The constitutional symptoms being due to ptomain poisoning, stimulants and tonics should be given according to indications.

The operative treatment must also vary according to the character and extent of the disease. The cardinal law of surgery to

evacuate pus whenever and wherever its presence can be determined should be strictly observed. It must be relentlessly followed into all recesses, and counter openings when required for drainage or irrigation must be freely made. Free and early incisions should be made to relieve tension and lessen adema, but care should be observed not to place the incisions too near each other, for fear gangrene may result from insufficient blood supply. Gangrenous tissue should be removed as thoroughly as possible. Copious irrigations with hot bichloride solutions should be used and the parts, if possible, should be kept enveloped in hot antiseptic dressings. Intubation or tracheotomy should be performed as soon as threatening dyspnea makes its appearance.

Serum-Therapy.—A prerequisite to the intelligent administration of serum-therapy is a knowledge of the particular kind or exact variety of organism that gives rise to the disease. When the streptococcus pyogenes was recognized as the micro-organism which most frequently causes these septic inflammations, great hopes were entertained from an anti-streptococcal serum. While a few brilliant results were obtained, it soon became evident that it had but little curative power. It was then learned that there are several varieties or species of streptococci which, though similar in their morphological and cultural characteristics, differed materially in the matter of their immune sera.

A considerable number of these differentiated species of streptococci have been discovered and a serum prepared by uniting the sera obtained from cultures of these different streptococci. This polyvalent serum has met with little more success than the original, but has by no means met the requirements. It is becoming more and more evident that the streptococcus does not play the predominant role in many infections, but that it occupies a subordinate relation to others, notably the staphylococcus, with which it may be associated. Until this interesting and promising subject is further developed, an attempt should be made to determine the character of the organism whose presence and effects are most in evidence and a corresponding serum administered. If in a desperate case a bacteriological diagnosis is impossible, the use of an antistreptococcus serum is justifiable. It can not do any serious damage and may save the patient's life. Saline infusions might be serviceable in some cases.

In conclusion, a few words as to the prophylaxis may not be inappropriate. Almost every organism that has been described as occurring in any position has also been described as growing in the mouth. From

Continued on page 71.

THE NEW ALBANY MEDICAL HERALD.

APRIL, 1907.

Old Series Vol. XXV, No. 336. New Series Vol. XIV, No. 187

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EDITORIAL.

WHAT WILL WE DO WITH THE CONSUMPTIVE.

The death rate of consumptives and diseases depending upon a tuberculous condition have reached a high figure; the public is warned of the dreadfulness of the disease—a thing it well knows already and is fast coming to look upon it as a "catching disease" a thing devoutly wished for by a certain class of physicians, laymen and sanitarians; while the fact that it can be communicated, none will deny. Isolation, report of cases to health boards and enforced sanitary measures are urged, and practiced in many places, but the results for good as a whole are not apparent; the disease is increasing.

Desire it or not as we will, push it to one side as we will, or ignore it, there is one question that will not down and this is "What will we do with the patient?"

The Clinical Reporter says that only a few comparatively can or will avail themselves of care in a hospital or sanitarium; moreover the sufferer looks upon his condition as a hopeless one and when fully realizing his malady, reluctantly forced to admit that he is tuberculosis stricken, he cares little for its effect upon the community. During the early stages he can not be confined, while many times the desire is unrecognized and advice unsought until a hopeless condition is reached. The anti-spitting ordinances are an acknowledged failure so far as stopping the disease is concerned, and fumigation promises to be of little if any better in the majority of cases.

Can we do nothing more with the plague? We believe much can be done and much good accomplished, not by putting the sufferer in "ward 23," shunning him, warning his friends to come not near him and giving him no treatment but a little "dope," but by a more rational and humane method (and let me here say that it seems positively wrong to keep a patient any more in ignorance of his condition with this than other maladies), teach him to harm not others.

Consumption is curable; this is the word of the best authorities and of experience as well; not all cases, to be sure, neither are all cases of typhoid, pneumonia or measles. But many cases have been cured and remained so for years, while evidence of the disease in many other cases is discovered only at the post-mortem examination. Does not this give a ray of hope?

Let the patient have hope, that "anchor of the soul," and let him in some measure understand the nature of his malady and the sanitary measures he should use to protect others; teach these poor sufferers that a few hours' sunlight is worth a barrel of disinfectant, and that cleanliness is the safeguard that is needed more than all else. Teach him, tell him that the sputa is the danger focus and we have never yet made such explanation even to the most ignorant sufferer that we were not rewarded in having all possible care to destroy it. Willingly will the sufferer occupy a bed alone; if due explanation is made of the evil effects upon the health of the bed-fellow, and more than once have we seen a poor stricken mother too poor to buy a separate bed, purchase a cot and occupy that when it was detailed to her that her breath might infect the young child which until now had slept in her arms.

This is not an isolated case; we could point to many, and while we well know that there are some who are "so blind they will not see," so stupid they will not believe, they are the exception rather than the rule. Fresh air, even though not always the purest, plenty of sunlight, individual utensils for the sufferer, the single bed, and if possible the single rooms, together

with a little plain judicious yet kindly instruction regarding sanitation, will do more to limit the spread of this disease than all the isolation and fumigation that can ever be practiced, for we can not isolate the patient during all his illness and we can not fumigate daily. We can practice sanitary rules constantly.

You and I are exposed daily; let us teach the consumptive that while we are his friend we want him to cough behind his handkerchief, not in our face; that he should keep his body clean, both for our sake and his own, that for the sake of his friends and the general public he should avoid spitting in public places as much as possible and use the same care with drinking vessels as he would if afflicted with a chancre on the lip. He needs not to be isolated, he needs not be and is not a pest, a thing of horror, a danger unless he so deports himself as to be one and his case is not without hope. A cure may be, as a matter of fact, many times is impossible, but his sufferings can be relieved, his illness made bearable and his last weeks or hours rendered as comfortable as in any other fatal illness. Take away the dread of the suffering and it is easier to control the infection.

MEDICAL FEES AND OVER-SUPPLY OF DOCTORS.

These two questions come to the front in some shape ever and anon, and to a large class of our profession are of more or less interest. The Carolina Medical Journal, in an editorial on this subject, says: As every addition to the ranks of the profession, beyond the requirements of increase in population and retirement by death or otherwise of corps of workers, necessitates a division of the fees already in vogue, it easily follows that the two questions are mutually related. Two propositions will not be controverted!

(1) The fees received for medical services (generally) are not in proportion to study, labor and financial outlay involved; (2) The supply of doctors annually graduated from our medical colleges is greater than the natural law of demand requires.

It is needless in this connection to assert that the law of the survival of the fittest must prevail; to use the old trite adages, "room at the top," "merit wins" that have almost attained the dignity of maxims. There is no place admitting their force in the general affairs of life, and even their potency when applied to the efforts of the newly graduated doctor, in the latter, they can not be recognized as a universal law. The rank and file of the profession know that merit does not always win, and that the course of those reaching the topmost

rungs of the ladder of professional success is not always because of merit.

It is a fact (more is the pity, too), that the tendencies of the times are towards making the practice of medicine more of a trade than a profession. The growing commercialism makes the question of fees paramount to all other interests, or at least places the real study of medicine and progress in its advancement as a science on a plane of securing enough knowledge to earn the fees. It is not intended here to convey the idea that fees are not to be considered in the practice of medicine, but the physician who considers the fees first and performs services commensurate with the fee expected has missed his vocation. He should carry brick and mortar and join the hod-carriers union, or some similar trade, with its union.

The question might arise as to what are adequate fees for medical services. To this no direct answer can be given. Every section must of necessity be a law unto itself, and in arriving at any estimate there are so many factors to be considered that hard and fast rules can not be formulated. The fees received should give the physician an income equal, at least, to that of the best of his patrons. That this is not the case, common observation will demonstrate without any argument.

Fees are largely a matter of custom in a neighborhood or section. They can be lowered, but it is hard to make a change to a higher figure. The writer of this does a practice in a country town in which his father located for the practice of medicine sixty years ago. He found a certain scale of charges, and followed them through a long practice. Practically the same fees are in force now though over a score of physicians have worked in the field in the time, all of whom considered the fees inadequate, and not one of whom accumulated much more than a decent living. This, too, in a prosperous section, where most of the citizenship are doing well and many growing rich. This case can be paralleled all over the State and shows that there is something radically wrong.

The necessity for increased fees over those of a generation ago is evident and the justice of making a change in the present rate can easily be demonstrated. Among the reasons, without stopping to enlarge on them can be mentioned, the increased cost of living generally, the longer term required for graduation, and consequent extra expense, the larger capital required to fit up and maintain an office, the absolute necessity for a greater yearly expenditure for books and appliances, the desirability if not necessity for occasional post-graduate work, and lastly, and by no means the least, the progressive physician of to-day ought to be

worth more to the patient than he of a generation ago.

The American public can generally be trusted to execute right when convinced of the justice of a measure. Joel Chandler Harris, in writing on another subject says (*Atlanta Constitution*, Jan. 26, '07): "A large majority of our people are blessed with common sense in a larger measure than those of any other country on the globe." There is common sense in this proposition and if properly brought to the attention of the public, it will be duly appreciated.

The over-supply of physicians is a prominent factor both in the number of fees and the amount of the individual fee, and in any solution of the problem it must be reckoned with. The number of students matriculating with medical colleges for the year ending June 30, 1906, was 25,204, and of this number 5,364 graduated in medicine. (*Jour. A. M. A.*, Aug. 25, 1906). The number of matriculants is the smallest since 1900, and the number of graduates the smallest since 1902. This fact is gratifying, as it shows a healthier condition, and the measures tending to its production should be fostered. The rigid examinations by the various State licensing boards, the higher standard of entrance requirements, the longer terms of study, the increased requirements for graduation, and healthier tone generally of the profession on the subject all have their influence in lessening the number of medical students.

It lies with the profession to remedy both these evils to a large extent by a straightforward course standing upon the platform of equity and justice, to the public as regards fees, and to the prospective medical student as regards the probabilities of success. On this last point an extract from an editorial in a recent issue of *The Medical Mirror* (Dec., 1906), on limiting the number of medical students offers a pertinent suggestion:

However, individual members of the profession can aid in relieving the situation. Every young man who is considering medicine as a means of livelihood is within the sphere of influence of some physician. It is thus easy to reach the entire student body.

Now let us look over the material and pick out those young men who are not equipped for the practice, or who have not "been called," but have chosen medicine because it "looks easy." If you know a young man, who would make a good brakeman or barber, but who thinks medicine offers an easier way to make a living, dissuade him by all means. Medicine does not need him. But, if you know a young man who has the qualifications and aptitude essential to a successful medical career, encourage him and assist him in his laudable aim. At the same

time assure him that it is a rough and rocky road he must travel and it is not too late to turn back.

After graduation, if, through inclination or circumstances over which he has no control, your young friend enters upon country practice, by all means lend him every aid and encouragement, for he, the country practitioner, is a blessing to humanity and deserves our highest admiration and respect.

ORIGINAL MATTER—Continued from page 68

what we know of the biology of these organisms, we can readily understand that the mouth should form a kind of hot house or forcing ground for their cultivation. Here is a moist cavity kept at a comparatively high temperature, covered with a thin epithelium, to which there is ready access from the outside air and through which food material is constantly being passed, particles of which may easily remain in small crevices or between the gums and teeth, which food in decomposing forms a favorable nidus for the development of micro-organism. During epidemics, or when people come in contact with persons suffering from various diseases, the organisms associated with such diseases are frequently taken into the mouth. It will then be seen that in certain cases injury of the mouth, of the periosteum of the jaw, or the soft tissues of the pharynx, may lead to infection. Septic infection is frequently the result of invasion from these regions, and numerous cases are recorded in which death has resulted from even the most trifling operation in the mouth and pharynx, from the extraction of a tooth, or the lancing of the gums in patients with imperfectly cleansed mouths, or in persons who had been engaged in attendance on patients suffering from infectious diseases; the organisms in such cases finding their way from positions in which they were comparatively harmless, into the wounds that were unavoidably made, whence they invaded the lymphatics and set up septic or other mischief. It is notable that the throat is affected in most of the infectious diseases and doubtless its crypts and glands afford the means of entrance to the infecting germs.

How important then to establish and keep up a healthy condition of the mouth by means of care of teeth and gums, removal and treatment of diseased tonsils and the establishment of nasal respiration by the removal of adenoids.

It has been said that digitalis is so insoluble that it may lie long in the bowel and then be suddenly absorbed.—Brunton.

ABSTRACTS AND SELECTIONS.

THE RELATION OF ULCERATIVE COLITIS TO DYSENTERY.

A. E. Carver (British Medical Journal) believes that there is some evidence that the bacillus of Flexner and Shiga occurs in cases of colitis. In three cases of ulcerative colitis, a positive result was obtained in one and a negative in two, with reference to agglutinative power. Flexner has already pointed out that the agglutinative reaction is obtained comparatively early in the course of the disease in dysentery, and that it disappears at an early date. This Carver considers as scarcely to be wondered at when one appreciates how great the chances are of a secondary infection occurring from the large bowel, and it is quite possible that the nature of such secondary infection may determine the clinical variety of the colitis. Reference is made to several epidemics of acute colitis. In some the symptoms were practically identical with those of acute bacillary dysentery, as were also the pathological lesions. The author believes that such articles as infected blankets (from bacillary case) may be the medium of provoking outbreaks of colitis.

STUDIES UPON EXPERIMENTAL VARIOLA AND VACCINA IN QUADRUNANA.

Brinkerhoff and Tyzzer (Jour. of Med. Research): The postulate made by Councilman in 1902, that experimental studies must decide the role that cytorrhcytes played in variola and vaccinia was the object of Brinkerhoff's and Tyzzer's work, carried out at the biological laboratory of Manila. Their results are very interesting and important and may be summarized shortly as follows: Experimental vaccinia in maca-cynomologus was produced in forty-six animals by inoculation into the skin, cornea and the mucosa of the soft palate, the nasal septum and the mucosa of the lower lip. Typical vaccinia resulted always, without general eruption; frequently the regional lymphatic glands were enlarged. Experimental variola was studied in two species of macacus and in the orang. The virus used was obtained from European and Philippine patients. Fifty out of sixty-five monkeys inoculated into the skin of the abdomen showed a general eruption in seven to ten days; altogether the course of infection was the same as in man. In four oranges inoculated the lesions were very similar to those of the human variola vera; in the other monkeys they gave more the picture of variola inoculata. Of eighteen monkeys inoculated in

the cornea and twenty-nine inoculated in various mucous membranes a very considerable number developed general exanthema. The results of experiments made to ascertain whether variola occurs naturally in monkeys were negative so far as inhalation was concerned, while of course direct inoculation into the respiratory passages was successful. The studies of the immunity of monkeys after vaccinia or variola inoculation showed they were immune to both forms after vaccinia, but not always immune to vaccinia after variola. The smaller production of immune-substances in vaccinia inoculata is cited as the explanation of this observation. The degree of protection depends upon the site of inoculation and upon the character of the virus. Cytoplasmic stages of cytorrhcytes were found in all of the specific lesions, intranuclear stages only in variola. They are, therefore specific for variola. They were very numerous in the primary lesions of the orang, and rare in the exanthema after inoculation into the skin, more frequent after intravenous injections. The authors found cytorrhcytes within the corium and within endothelia of blood vessels and they consider this observation as an indication of the manner of dissemination. The most feasible explanation for the constant presence of the cytorrhcytes is, according to the authors' opinion given by assuming that these cell inclusions are parasites and are the etiological agent of the disease. Differences exist between the reaction of vaccinia and variola virus on physical and chemical influences; the latter passes the Berkefeld filter, not the former. Sixty per cent. glycerine prevents a general exanthema, and if passed a number of times through monkeys it loses its virulence.

In the same journal Tyzzer describes his studies in the histology of varicella lesions. Of the interesting structural changes it may be only mentioned that he found in epithelial cells in nuclei and protoplasm peculiar eosinophilous bodies. He leaves it questionable whether these inclusions are parasites.

A CASE OF LIPOMA IN THE RIGHT VENTRICLE OF THE HEART.

R. Adams Brewis (The Lancet): A girl, aged seven months, was well until June 16, 1905. At 2 p. m. she vomited and refused the breast. At 9 she was worse, and at 10:30 dead. The body was pale. On autopsy there was found in the right ventricle a fatty tumor which arose from the interventricular septum and completely filled the auriculoventricular valve. This tumor was pyriform, was two inches long and weighed 9½ grams.

FINAL RESULTS AFTER THE REDUCTION OF CONGENITAL HIP DISLOCATION.

Nove-Josserand and Petitjean (*Revue d'Orthopedie*) give complete memoranda on thirty-eight cases of congenital dislocation of the hip, made up of twenty-four double dislocations and twenty-eight single dislocations, composing fifty-two hips treated in all. Their results were as follows: Reductions, sixteen; pseudo-reductions, twelve; transpositions, seventeen; relaxations, four; fracture, one; doubtful results, two. They conclude that a radical cure is rare after seven years. The most favorable age for reduction is before five years, preferably between two and a half and three years. After ten or eleven years relaxation is probable, but amelioration may be obtained in spite of this, which justifies an attempt at reduction, especially in the extreme form of deformity. It does not seem an advantage to reduce the time of retention in a plaster bandage. On the contrary, a shorter immobilization period seems to favor relaxation of the hip.

MEDICAL GLEANINGS.

The most successful antidote to carbolic acid is a strong solution of Glauber's salt.

For a sprain, wrap the parts in flannel or absorbent cotton, saturated with spirits of camphor. Nothing better.

Arsenic is not a universal remedy for diseases of the skin, although frequently erroneously applied for that purpose. It is indicated in squamous, vesicular, and some chronic affections.

Everything is to be gained and nothing to be lost by having patients remove enough of their clothing, to allow of a completely satisfactory examination in all cases. Instances can be called to mind by any physician of erroneous judgments arrived at before exposure of other parts of the body showed conditions altering one's opinion. Especially is it important to compare the corresponding members of the body on the sound and the affected side, in all doubtful cases.

Malarial Diarrhea, Quinine and proper attention to the diet are most important. The arseniate of quinine may be given for periodic dysenteric cases. Bartholow advocated the use of Fowler's solution two drops with five drops of laudanum before meals. Shoemaker gives every hour or two a powder containing five grains each of salol, bismuth subnitrate and prepared chalk.

In any case of rigid perineum of whatever degree it must not be forgotten that full anesthesia will do more to prevent lacer-

ation than any so-called manual support. Under profound anesthesia the head may be allowed to advance more slowly, can be arrested at the height of pains, and the voluntary efforts of the patient do not interfere with the vis uteri, but allows the accoucheur to have perfect control of the last stage of labor.

Nasal Diphtheria. The cases are not so common as in preantitoxin days. The gray, adherent false membrane usually extends from the tonsils. Antitoxin should be given early in full doses. Aside from this specific treatment, Hughes advises syringing the nose every two or three hours with a solution of sodium sulphite, three drams in two drams of glycerine and four ounces of water.

Whenever possible the patient should be anesthetized on the operating table. There is no good reason why all operating tables should not be supplied with wheels. The patient could then be wheeled from the anesthetizing to the operating room, thus avoiding the lifting and jolting, and with no intermission as regards the anesthetic. If the patient is anesthetized in the operating room, every one should refrain from conversation until the patient is well under; neither should the patient be touched by any one until ready for the operation. Also the patient's room should be darkened, and quiet observed, after the operation. When the gas-ether sequence is used, surgeon, assistants and nurses should be ready before the anesthetic is started. Surgical anesthesia is usually reached in three or four minutes, and the operation should begin at that time.—J. T. Gwathmey.

L. Weiss, New York, reviews the history of the social evil, showing that it has existed at all ages, and concludes that its absolute eradication is impracticable. "There is present on one side an atavistic dormant tendency toward polygamy in man, a developmental defect as it were, mitigated by religion, education and self-control; and on the other an almost extinct inclination for polyandry in the female, present in an almost negligible quantity." The male factor, he thinks, "should be met, though not in an equalizing proportion, by the higher sense of morals in women, developed in them through ages. Whatever remains between these two disproportionate traits must, of necessity, be imputed to him. Here is where so-called social conscience must be awakened." Even if there should come a time, however, when a higher standard of sexual morals eradicates the factor of masculine vice the feminine factor will not cease to produce its quota, though to a lessened extent. Besides, the small number of atavistic prostitutes, the sources of prostitution are the entrance of women into industrial life and losing the protection of the

home, the crowding and lack of privacy in the dwellings of the poor, child labor, employment agencies, the tendency to migration to the cities and the consequent harder conditions of life. As regards the question of abolition or regulation, Weiss takes a sort of neutral position; there are excellent points he says in each system, but better ones yet in a blending of both.

THESE ARE COCA FACTS.

First—Remember that the classic coca of the Andes—such as the Indians use for endurance against famine and fatigue—is rich in valuable principles which are extremely volatile. This coca is not to be found here in the open market. Don't waste valuable time experimenting with inert leaves. Mariani solved this problem nearly fifty years ago when he first presented the medicinal qualities of true coca in nutritious wine, since known the world over as Vin Mariani.

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worth which has maintained Vin Mariani before the medical world during the last half century.—The Coca Leaf, May, 1905.

The conditions obtaining in acute nasal catarrh are essentially those of an inflammation of any mucous membrane. First, an engorgement of the capillaries, then an exudation of serum into the tissues, then a further exudation on the part of the mucous or serous membrane.

To attempt to terminate the trouble or alleviate the discomfort by an astringent or any wash of an acid nature is simply to temporarily lessen the secretion without in any degree reducing the congestion or stimulating the local circulation, thus actually rendering the condition worse than before.

A remedy to be effective must first empty the mucous membrane and then prevent a re-engorgement by stimulating the blood vessels into increased action and compelling them to resume their normal functions.

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The New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV. No. 317.
New Series Vol. XIV. No. 188.

New Albany, Ind., May, 1907.

\$1.00 PER ANNUM.
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ORIGINAL.

OBSTETRICS IN COUNTRY PRACTICE. *

By A. G. Wiley, M. D., Bar Mills, Maine.

This paper has been prepared with the idea of bringing up for discussion some of those problems which confront the young physician, who has chosen to do his work in the country. It would be well-nigh impossible to prepare a paper of this kind without expressing the views of the writer, as to what to do and when to do it, but oftentimes the writer has wondered whether he had the right idea or not. If this paper can bring about a free discussion by those more experienced and better equipped than we, who have had only a few years practice, it will have accomplished its purpose.

In the country doubtless the practice of obstetrics is the most important branch of the practitioner's science and art. The application of high forceps and the doing of podalic version, successfully, are to my mind more difficult than appendectomy, yet no country physician knows when he will be called upon to do either operation.

People in many sections of the country are prejudiced against trained nursing, careful antiseptics, and a plainly-furnished, easily cleared lying-in room. Oftentimes our cases are a long distance away and we are tied in the vicinity for many hours, forced to neglect others, who need our attention. If we have been engaged beforehand, we can overcome many obstacles by causing arrangements to be made properly, but many times we don't know anything about the case until aroused from slumber or summoned hurriedly by a man with a foam-flecked horse. In as far as possible the lying-in room should be cool, airy, plainly-furnished and clean. That abomination, the featherbed, has caused the writer no end of trouble; most any mattress would be better for a confinement case.

The country nurse, as a rule, has little if any knowledge of asepsis and antiseptic precautions. Some are willing to learn, some never can learn. Many times the writer has

seen a nurse, after carefully taking the maternity pads and napkins, undo the bundle and remove one, with hands fresh from the kitchen or from shelling green peas. It is a wonder that we do not get more septic cases in the country than we do. It is not safe for us to allow such a nurse to give a vaginal douche. Is a vaginal douche on the fourth or fifth day following confinement necessary? The author would like to hear from others on this point.

The physician in the country must be alert, watch everything his helpers do, and perform his own part of the work properly, as well.

It is not my purpose to find too much fault with the so-called experienced nurse, for often she is all right and willing to do as she is told, but too many of these nurses know more than the young doctor does, for they have perchance had a vast experience as compared to his. Firmness and tact are needed in dealing with such nurses, but most of them can be made to see that which is reasonable.

Patients who have been attended in confinement before and had to furnish nothing but a dish of hot water and some bichloride solution for the hands, look upon the sterilizing of sheets, towels and the boiling of instruments, string or silk, and dressings for the cord as matters of foolishness on the part of the young doctor. Happily these prejudices are being overcome, and patients are more inclined to engage their attending physician before hand and get ready for the event as they should.

While gestation is a physiological process, and in a normal woman, under normal conditions, it ought to progress favorably, watchfulness on the part of the physician, especially during the late months, would seem to be wise.

Diet does not have much to do with the nausea of pregnancy as a causative factor, but careful regulation of the diet will help in controlling that nausea.

Is the nausea a pure neurosis or does torpor of the liver and the consecutive constipation have a large share in causing the disturbance? A discussion of this point would be helpful. Remedies for nausea are too numerous to mention; an aggravated case generally means trying half or all of them.

*Read before Maine Medical Association.

Constipation is a thing to be avoided. It is surprising what a mass of fecal matter the average woman unconsciously carries in her colon, and this, too, although she will state that her intestinal tract is emptied each morning. A laxative every night or every other night, during the late months, is usually indicated. Enemata are not advisable on account of the frequency of hemorrhoids, and irritation of the uterus.

The urine of the gravid woman should be examined every two weeks during the later months of pregnancy, and oftener in the event of albumin being detected. If the skin is kept in a healthful condition by frequent bathing and massage, it would seem that the great strain to which the kidneys are subjected would be relieved in a measure. The pelvic capacity of every primipara should be gauged at as early a date as possible. A careful examination early as to tumors, pelvic deformities, etc., would be wise, but it is seldom possible in the country until after the fourth or fifth month.

Fresh air and exercise with moral suasion may do much to prevent mental worry and despondency. In the country (perhaps it is not as much so in cities) the idea is almost universally prevalent that maternal impressions are responsible for all sorts of dire consequences.

The physician can often dispel his patient's fears, by pointing out the fact that such cases are extremely rare.

The nipples should be kept free from pressure and the wearing of a tight corset is to be discountenanced. Bathing the nipples in alum, tannin and the like does more harm than good, and it is a question whether a nipple lacking in erectile tissue can be improved upon by traction or massage.

Hemorrhages during pregnancy should be investigated, for they usually mean vicious insertion of the placenta.

When called to attend a confinement case, after getting things sterilized, or under the way toward sterilization, the first thing to do would seem to be to ascertain the exact condition of affairs. In most cases as much can be learned from abdominal palpation and location of the fetal heart sounds, as from vaginal examination.

Normal cases are the rule in country practice, and it seems that the percentage of normal as compared with abnormal cases, is higher than in more thickly settled communities.

In a normal case, which is progressing satisfactorily, the physician's part is largely a waiting one. A safe and satisfactory method of conducting the case, as far as the author's limited experience goes, has been to thoroughly cleanse the patient's hips and external genitals with soap and water, followed by the cyanide of mercury or the bichloride solution, and cover with a sterile

sheet or towel, before making any examination, and if labor has not progressed far enough to necessitate staying about the house, direct the attendants to keep the sterile sheet in place until his return.

After delivery has been completed, the physician had best attend to cleansing the patient, applying aseptic dressings, seeing that the patient is comfortably placed in bed and that her condition is satisfactory in every way. The writer's limited experience has taught him not to leave these things for the nurse to do. We can if we will be as careful of our asepsis in the country, as our city brethren are.

Is it wise to hurry cases by the use of drugs? It seems to me to be both unnatural and dangerous.

The administration of ergot following the delivery of the child, is practiced by many and is probably a proper and safe procedure. When hemorrhage during labor has been rather free, the author has employed ergot, but seldom otherwise.

The best time to administer the drug depends probably upon circumstances, but, as a rule, it had better be deferred until after delivery of the presenting part. An opinion concerning the use of quinine, when the labor pains are not effectual, would not be appreciated. Personally the author has never seen any results from its use.

Stroking and kneading the uterus through the abdominal walls, together with an attempt to gently force the anterior lip of the cervix upward and backward, with the finger, the writer fancied helped in some cases.

Support of the perineum is of little avail. Holding back the head, if the pains are too strong, until the perineum is thoroughly stretched will do more good. If the head recedes with every pain, things will as a rule come out all right.

If we find an abnormal presentation, it would be best to send for assistance, but we can't always get it in the country on account of distance and time.

The application of forceps and delivery of the child without skilled assistance, is an operation requiring great care, good judgment and coolness of the part of the physician. To anesthetize the patient, superintend the prolongation of anesthesia, and attend to the application of forceps and the subsequent work needs a cool head and a steady hand. Ether is probably the safest anesthetic in country practice, for the anesthesia has to be kept up very often by an inexperienced nurse.

After the forceps have been locked, a pull in the right direction is far more effectual than twisting and rocking the forceps from side to side. Traction should be intermittent, simulating labor pains as far as possible. The forceps are a grand invention, but good judgment is necessary as to when

to use them, and they can produce baneful results if used too freely by the young practitioner in the country. A safe rule is laid down by many writers on obstetrics—"Never apply forceps until the head is engaged."

Version should not be attempted without skilled assistance.

The author had one case where he felt that it must be done and it was well-nigh impossible to get help.

The version was done and the case resulted favorably, but probably a few grey hairs were added to the author's scalp that night.

Podalic version is more often indicated than is generally supposed probable. A discussion of this question would be doubtless interesting.

It is best, in the writer's humble opinion, first, in the transverse presentation where the child is not freely movable; second, in head presentations where from some complication the head fails to engage; third, in cases of hurried delivery, such as eclampsia, placenta previa, accidental hemorrhage, or pressure on a prolapsed cord; fourth, in face presentations and in occipito-posterior position which can not be corrected.

Podalic version would seem to be unwise when the cervix is not dilatable, when the uterus is in tetanic spasm, when the presenting part is firmly wedged into the pelvic inlet and in contracted pelvis with a conjugate of less than 3 3-4 inches; long continued dry labors or the injudicious use of ergot, are apt to cause tetanic spasm of the uterus.

If an exact diagnosis has been made, and the physician is sure of his ground, there would seem to be no reason why an obstetric operation, barring perhaps Cesarean section, can not be done in the country as well as anywhere.

The delivery of the placenta sometimes causes a deal of trouble and anxiety. Fifteen to thirty minutes usually elapses between delivery of the child and the placenta; the author has seen one case of an hour. Adherent placenta and retentions of the membranes become more rare as a physician increases his practice. Crede's method of expulsion will accomplish much, and if the obstetrician keeps up compression upon the uterus after the child is delivered, he will not only usually see the placenta delivered naturally, but will seldom see any marked hemorrhage. An old practitioner with nearly forty years of experience in country practice of whom the author asked some questions recently concerning placental delivery said: "Young man, don't hurry the placenta;" doubtless sound advice. Traction on the cord is unnecessary and may be dangerous.

In two cases the author has seen the lower uterine segment contracted and the membranes got nipped, but by waiting for the uterus to relax a trifle, the membranes

emerged intact. Rarely we encounter a case of true adherent placenta, when manual extraction, under the strictest aseptic precautions, become necessary.

Accidents are bound to occur sooner or later and we must be prepared. In post-partum hemorrhage vinegar is justifiable, but vinegar is not always sterile. The icicle or ice-water douche may work, but tamponing with iodoform gauze 5 per cent. or, better still, plain sterile gauze, is sure and comparatively safe. Repacking will have to be done, perhaps several times before the uterus contracts down, but if the tamponing is done thoroughly the hemorrhage has got to stop.

Luckily eclampsia is rare, but we must be ready if it occurs, perhaps miles away from help. Inhalations of chloroform, chloral and bromide by the rectum and hypodermic injections of trinitrin should control the spasm while waiting for help to empty the uterus.

In placenta previa, it would seem best to send for help, start in dilating the cervix and deliver as rapidly as possible, either by podalic version or with forceps.

Cervical tears, involving the circular artery, call for immediate trachelorrhaphy. Immediate trachelorrhaphy in any other case had probably best be left undone.

Lacerations of the perineum need careful attention, even from the practitioner far remote from village or city. The ancient method of simply passing the sutures in at one side and out the other will not stand the test of modern methods, for the days are fast slipping by, when securing a skin perineum is deemed sufficient. A careful examination of the pelvic floor will determine the method of repair.

A running suture for the mucous membrane, with deep sutures of No. 4 or 5 catgut or silkworm, will usually suffice, but if the laceration is extensive, some modification of Hager's method will probably give the best results.

PNEUMONIA.

By John E. Lockridge, A. M., M. D.,
Indianapolis, Ind.

On seeing the caption of these lines, in imagination I can almost see my readers cast a doubtful glance from the manuscript to the waste basket, for during the last month or so every medical journal we pick up has a surfeit of articles on pneumonia from all sorts of doctors, recommending all sorts of treatment, as diverse from each other as the poles, and all successful and satisfactory; and yet, the frightful mortality from the disease goes on just the same. My text then is, The increased mortality in pneumonia, and what is the cause of it? That there has been an increase in the last decade or so above decades before within the mem-

ory of the oldest practitioner, goes without saying. Information through the public press shows us that this is the case all over the country, for whenever one of sufficient prominence as to be noted is seriously ill of the malady, it is at once prophesied by the laity that it will prove fatal, and the prognosis almost invariably proves too true; for instance, ex-President Harrison, Gen. Wheeler, Marshall Field, Mrs. Davis, and many others I could mention. The same is true within our own personal observation; for instance, in our own city, from the report of our Board of Health, in an average daily death rate of eight to ten, I have noticed that from one-fourth to one-third during the last month or so have died of pneumonia. One day, out of eleven deaths, five died of this disease. On another day there were reported four deaths from our city hospital alone from this malady.

Now, being forced to give more or less thought to the cause, or causes, of this striking increase, which has given the profession so much anxiety, and has well nigh thrown the laity into a panic, who regard it as almost a plague, I have come to the conclusion that there are at least two principal causes—namely, the contemporaneous prevalence of la grippe, and the faulty and dilatory treatment based on the erroneous, unfortunate, misguiding and most pernicious teaching that pneumonia is a self-limited disease, and that no drug or plan of treatment has any power to control or abridge its course, much less to jugulate it, and that it will run a course of from six to eight or nine days in spite of any and all treatment. There is no question but that the advent of la grippe (1889-1890) has cast its baneful livery over the course of pneumonia, increasing its peril and prevalence, thereby increasing very greatly the mortality of the latter. In case the latter is a complication or sequel of the catarrhal type of the former it proves to be much more serious and less amenable to treatment than the frank, lobar form of pneumonia. Of course, the intractability and fatality of the disease are due to the spoliation of the system by the double infection, vitality being greatly reduced by the grippe before the intercurrent of the pneumonia.

As to the dogma that pneumonia is a self-limited disease, I believe that Osler snuffed up this vagary several years ago, and that a limited number of doctors have been sneezing thereby ever since. I can not help but think that many lives have been lost by adhering too closely to this doctrine, especially by young and inexperienced physicians, awaiting some time limit for the crisis, and withholding certain special drugs and other means more or less energetic and calculated to control and even arrest the inflammation that is surely destroying a vital organ.

The advocates of this new doctrine are sticklers on the limit of the disease as well as what constitutes pneumonia, or the boundary line between active congestion and true inflammation. A month or so ago a physician of good ability reported a case of pneumonia for one of the most prominent medical journals in the country, and one of the very best that I have had access to, and asked the editor to say whether or not it was a case of true pneumonia. There was the severe initial chill, high fever, frequent pulse, hurried respiration, pain in the side, cough, with rusty sputum, flushed cheeks, dullness on percussion, and bronchial rales. The young lady's father had died of consumption and a brother had just died of pneumonia, and the doctor gave a rather doubtful prognosis. Treatment: Most active catharsis with calomel and soda, aconite and gelsemium in full doses, and counter-irritation even to vesication. On his visit on the next day the pain and fever were all gone, pulse and respiration almost normal, cough and expectoration allayed—in short, the patient was practically well, and wanted something to eat. The editor replied that "it was a case of active congestion of the lung, and that the active treatment had arrested it." Now, if this was not a classical type of pneumonia from Laennec to the present time, there is no such a disease—it is a nosological nonentity, a "barren ideality." In active congestion of the lungs we do not have dullness on percussion and rusty sputum. Had the above case run six or eight days and passed a favorable crisis, with identically the same symptoms and physical signs, and under the same treatment this editor and all others would have pronounced it a case of true pneumonia.

When I attended lectures and began the practice of medicine, just fifty years ago, I recollect that a small minority of writers and teachers taught that active congestion had passed, and that true inflammation was established only at the formation of pus. This vagary was short-lived, however, for the formation of pus is classically recognized as one of the results of inflammation, just as much as gangrene is another. Now, if these gentlemen have coughed up this ancient mermaid and revived and rejuvenated it into the averment that true pneumonia means purulent infiltration, or gray hepatization, then I agree with them that it is self-limited, or more truly unlimited.

In the face of such a radical difference of opinion as to the nature of the disease, which almost imperils the long accepted very pathology of it, it is not strange that a good many doctors halt and hesitate in their therapeutics, trying and experimenting with drugs whose known properties are foreign to the relief of the trouble, and who are

waiting and hoping and even yearning for that time limit, which is too often not by lysis, but by mortal crisis! In an experience of five decades, and during every year of that period I have treated more or less cases of that malady, I know that under a treatment consisting of possibly blood-letting, a brisk cathartic, aconite or veratrum to full effect, with perhaps a fly blister further on, I have seen many, very many cases arrested in twenty-four or forty-eight hours, and many more abridged to a course of three or four days. I have distinctly in mind four cases that I have treated within the past year; two of acute bronchitis, one of bronchial asthma, and one of gripe, in each of which there was an attack of intercurrent circumscribed pneumonia with dullness on percussion and bronchial respiration; and in twenty-four hours after the drawing of a fly blister there were the crepitant rale (redax) mingled with the vesicular murmur; and the change for the better was so positive and striking in the symptoms and physical signs in all of them that no further call to three of them was necessary.

In conclusion, I wish to say that I do not claim to cure every case of the disease, as some writers seem to do, for within the last ten or twelve years I have lost two cases in spite of the most determined treatment I knew how to give them. One was a lad fifteen or sixteen years old with double pneumonia, and the other an old lady who was in very poor general health; but what I do claim is that it is not a self-limited disease like scarlet fever, typhoid and small-pox, and that many cases can be arrested on the threshold, and that many others can be greatly abridged in their course by a prompt, logical and adequate course of treatment.

CARCINOMA OF THE SPLENIC SEGMENT OF THE COLON.

By S. M. Hohf, M. D., Yankton, S. D.

Patient, J. K., age 64; occupation, farmer. Family history, negative, so far as could be ascertained. Health apparently good until about four years ago, when he first became conscious of a progressive costiveness, and for which condition he had taken much treatment. Relief was only transient.

When I first saw him, July 15, 1904, he had made the rounds of physicians and was becoming quite weak and emaciated and decidedly worse in his primary trouble, that of constipation. He was having pains at intervals, radiating over the abdomen, with some distension. His appetite had been fair, and what he ate produced no distress, save a temporary fullness.

Urinalysis was negative. On examination, the abdomen was found somewhat distended. No tenderness or distress on deep palpation and the proctoscope revealed nothing.

He was given a high rectal enema in the knee-chest position, when it was found that he could retain only $1\frac{1}{4}$ quarts of water, which produced the pains he had experienced before, but greatly intensified. The fluid was immediately ejected and with considerable force, but no fecal matter whatever was voided. The obstipation appeared to be complete, and under repeated trials no results were attained.

With this history, and bearing in mind his advanced years, which we have been taught heretofore to regard with suspicion in nearly all cases of gastric or intestinal affections, a provisional diagnosis of a neoplasm and probably malignant, was advanced, although absolutely nothing of the nature of a tumor could be discovered.

The patient was advised to enter the hospital for further treatment and more than likely operative intervention. He preferred, however, remaining at his home and declined all operative treatment.

Omitting all details, at the end of about thirty-eight hours he was dead, the obstruction not having been overcome.

An autopsy was very fortunately obtained and which proved to be most interesting and verified the provisional diagnosis. On examining the colon an annular tumor about two inches in width was found in the splenic flexure and completely occluding the lumen of the gut, not even admitting the passage of water, which was easily demonstrated on removal of the section. Slight adhesions to adjacent structures were found, but no macroscopic involvement of lymphatics or metastasis to other organs could be detected, which, to my mind, would have made this an ideal case for resection, although late, and a probable cure anticipated had consent been given. The tumor was an adenocarcinoma and nowhere showed evidence of beginning necrosis.

Case 2.—Miss Kathline W., age 26; occupation, teacher. Family history, negative. Health always very good, except during childhood, when she passed through the usual diseases of infancy.

In October, 1904, I was consulted because of three or four attacks of nausea and vomiting she had experienced, coming on in the forenoon, after breakfast, and during her school work. She paid little or no attention to these attacks, thinking they were likely due to indigestible food she might have eaten. What brought her more particularly to consultation was the pain she experienced during the last attack, which was the fifth, so far as she could recall, together with constipation, which had troubled her for several

* Read before the South Dakota State Med. Assn.

years, but which was now becoming quite pronounced. Her appetite was good, slept well, and enjoyed life in general, excepting during these attacks. The pain she described being quite sharp and diffuse, not circumscribed, but appeared to be "all over the stomach," lasting an hour or so, and not relieved by vomiting. She had just passed through an attack and was still belching considerable gas, which she informed me was the usual sequelae. On careful examination nothing tangible could be found upon which any gross lesion, at least, could be based. She was given a mild laxative, instructed to watch the stools for any evidence of blood or mucus, and to promptly return in case she experienced any further trouble.

Nothing more was heard of her until March 27, 1905, when she again presented herself at my office, suffering quite severely. Constipation had become more and more obstinate. No passages, in fact, being obtained only as large doses of salts were taken daily and food confined to the simplest liquids. She thought she had observed considerable mucus in the passages, also traces of blood. The stomach had begun to rebel against the treatment subjected to and she had had no evacuation for six days, resulting in pronounced distension of the abdomen and more or less constant nausea and vomiting.

A remarkable feature at this time was the absence of the sharp radiating pains of which she complained on her first visit, her distress being confined primarily to the nausea and vomiting on taking the slightest nourishment, and a "stuffy feeling." She was immediately given a high colonic enema to aid in determining, if possible, the location of the disturbance, whether in the large or small intestine, by ascertaining the capacity of the colon, or whether we could thereby safely exclude the colon in arriving at our conclusions.

It was found that she could retain quite readily a full gallon of water, by measurement. On voiding it, however, not more than half of the injection was returned. No fecal matter was passed, but traces of blood and broken down tissue was found, upon which a diagnosis of malignancy was made. The exact location of the lesion, however, could not be determined, since at no time could a tumor be made out under the most careful search with the proctoscope and otherwise by a competent consultant and myself. The amount of water admitted into the colon, together with the active peristaltic wave which was plainly visible, and which appeared to knot up the intestines in the right lower quadrant, and finally lose itself there, would lead one strongly to conclude the trouble to be situated elsewhere than in the lumen of the colon.

The patient was urged to enter the hospi-

tal and make ready for an exploratory incision and relief, to which she consented.

Operation—Patient much exhausted at this period, and abdomen greatly distended. A vertical incision was made over the cecum, splitting the right rectus at its outer border. On opening the peritoneum the deeply congested wall of the distended cecum immediately presented. It was carefully isolated and incised to relieve the distension and permit better access to the obstruction. Large quantities of gas and fluid escaped, after which it was plainly manifest the disturbance was not in the region of the cecum, but lower down. The colon was followed along its course, and the trouble found, consisting of a firm adherent mass at the splenic flexure. Owing to the condition of the patient, it was not advisable to remove the mass at this time; therefore a simple right colostomy was done, without an attempt to form a spur in the original incision, and the patient returned to bed. Prompt recovery ensued. Nausea and vomiting ceased at once, and the day following she asked for food. All bowel evacuations were through the cecal opening, and she rapidly took on flesh and color. Six weeks subsequently, and after convalescence had been quite thoroughly established, the colostomy opening was temporarily closed to secure asepsis, an incision was made to the inner side of the left rectus extending from the costal arch to the umbilicus, through which, without special difficulty, the mass was removed. Moderately firm adhesions were found attached to fundus of stomach and spleen, which were cut between ligatures, including also the phreno-colic ligament. Approximately seven inches of gut were removed. End-to-end anastomosis was made with chromic catgut, a small cigarette drain was introduced down to line of approximation, and the abdomen closed. The colostomy opening was also closed at the same time.

Convalescence was uninterrupted. The small drain was removed on the fifth day and a normal semi-solid evacuation obtained by small enema on fourth day following operation.

The patient is now, thirteen months after removal of the tumor, apparently in perfect health and pursuing her vocation.

In reviewing our findings in this case, it was at first difficult to explain how we secured nearly the full capacity of the colon with the obstruction in the splenic segment. This was cleared up and beautifully demonstrated before my little audience, in taking the segment removed and attempting to pass water through it, when it was found the lumen was patulous in the proximal direction, but would not allow the water to pass going in the opposite. This suggested a valve-like action in the mass and instant-

ly made clear the fact that only a portion of the water given the patient previously by irrigation was returned.

On cutting the segment lengthwise, three oblong cauliflower-like growths were found, which appeared to extend on very short pedicles, from the proximal margin of the mass itself. These little masses would very snugly lie back against the wall of the bowel to slight pressure exerted from the distal end, but would close up the lumen very effectually from the other way.

The growth, which I herewith present, on microscopic section, proved to be an adenocarcinoma.

It is now well known that carcinoma occurs, and apparently with alarming frequency, in any portion of the intestines from the stomach down. The frequency, however, of its occurrence in the splenic segment is not as a rule given the attention and relative importance it deserves.

In our usual examination of a patient we are too prone to single out the rectum or cecal end as the seat of the trouble, to the exclusion of other important and vulnerable parts. This should not be done, but that the whole colon, including its angles, should be borne in mind. And more particularly, the splenic flexure, whose angle is not always definite, but in some instances quite acute, thus more subject to irritation and possible abrasion from hardened feces, and which should be most carefully considered in its deeply seated locality, under the costal arch.

This point should be emphasized because of the fact that in some individuals it is a physical impossibility to definitely palpate a neoplasm unless quite large, in the splenic segment. And then again, since a malignant growth may exist a considerable period without creating any disturbance whatever of which the patient may be aware, the question of an early exploratory incision becomes very pertinent. An incision in proper hands will do no harm, and it should be urged in all cases presenting vague subjective symptoms, usually the first, hence the most important, being a sense of uneasiness in the abdomen, with slight distension, accompanied by the expulsion of gas, which appears to be increased from the rectum as well as from the stomach.

The stools, if carefully examined, will be found to be mixed with gelatinous mucus of a transparent and viscid character, not whitish or coagulated as usually found in inflammatory conditions of the colon. Traces of blood will also be observed in some instances, but not until ulceration has taken place, which may be quite late in the disease. A history of chronic constipation is almost always given, which should be noted, together with a weakness and cachexia out of proportion to the subjective symptoms.

When these conditions present it should render us suspicious, and the stage of palpable tumor formation, with the resulting acute obstruction anticipated by an early exploratory incision through the abdominal wall. In this way only can valuable time be gained and the diagnosis thus earlier made than usual, the complete extirpation of the disease, with permanent recovery, would be the rule, instead of the failures for which the delayed diagnosis is mainly responsible.

A percentage of 35 to 38 mortality is unnecessarily high and should be reduced. In fact, some surgeons are reducing their mortality markedly, but only as earlier operations are undertaken and before the disease becomes widely disseminated. While it may seem that glandular involvement and metastasis to neighboring organs takes place later in malignant disease of the colon than is usually found elsewhere, it should make us none the less cautious, and in recognizing the lesion at the earliest possible moment, and adopting operative measures, without which carcinoma anywhere in the intestinal canal becomes absolutely hopeless.

In thus very briefly reviewing my experience with carcinoma of the splenic segment, I shall conclude with the following summary:

First. An increase in frequency of malignant disease of the intestines in the young is noticeable. Therefore age is only of minor importance as a predisposing factor.

Second. Among general practitioners the diagnosis is very rarely made until the disease has sufficiently advanced to produce obstruction in the bowel.

Third. When situated beyond the rectum, a positive diagnosis of carcinoma can only be made by an exploratory incision through the abdominal wall.

Fourth. And to reiterate, cases of prolonged constipation, with periods of distress in the bowels, emaciation and a sense of weakness, uninfluenced by treatment, are symptoms of importance and should not be lightly passed over.

THE PRESERVATION OF BEAUTY.

By Dr. W. T. Marrs, Peoria Heights, Ill.

This is a subject which most physicians affect to consider beneath their dignity, but my attention was called to it some years ago through a patient of whom I am personally very fond. She had tried several professional "beauty doctors" with no benefit, and had spent quite a sum of money in various creams and washes. For her sake I began the study of the subject, taking up the anatomy of the skin, its blood and lymphatic vessels, the sweat and sebaceous glands and the hair follicles. Then there came the study of the loose tissues beneath the skin, and the state of the superficial muscles.

The more I studied the problem the more interesting it became; and now, although I do a general practice, I take great pleasure in all cases of this class.

For beauty in general the first requisite is health. The skin can not remain in a normal condition unless it is supplied with plenty of strong, rich blood. The roundness of the figure depends largely upon the amount of fat which is deposited in the loose tissue which lies just beneath the skin. This is much better developed in women, as a rule, than in men. In times of sickness this fat is used by the body to keep up the strength, and it is not deposited again until the system has sufficient nourishment for all its needs and some to spare.

In people who have been plump and have subsequently grown thin it is usual to find that the skin is wrinkled, because the layer of fat beneath it is gone. The skin is too large for the structures it covers, very much as one's clothes are under the same circumstances.

The tissues of the skin itself may become wasted, and the skin is left thin, dry, and often covered with fine wrinkles. This is the ordinary process which takes place in advanced age, but in cases of ill health or bad treatment it may happen in young people.

In studying the structure and functions of the skin my attention was called to the readiness with which certain substances, particularly some fats, may be absorbed directly by it. Physicians have made use of this function of the skin in the application of inunctions and liniments, but have been slow in following up the subject in the treatment of the skin itself. This property is the reason for the use of flesh foods, of which there are many on the market. It is unfortunate that this line of work has fallen so largely into the hands of charlatans and quacks; for an application may give a very pretty result for the time being, and yet if used too long do damage which can not be repaired.

I have gotten the formulas of many eminent specialists and compared them with the principal flesh foods on the market; the one which I think best fulfils all the requirements for general use is that called Dr. Charles' Flesh Food. It is perfectly harmless, in the first place, does not stop up the pores of the skin, and gives results in a comparatively short space of time. These cases are necessarily slow, but if the directions are faithfully carried out one will rarely be disappointed. The following notes were taken from cases in my own practice.

Case I.—Mrs. Viola M., age 24. She is the mother of one child, now about three years old. She told me that since weaning the baby her breasts had shrunken and become soft, flabby and pendulous. The woman has an excellent figure, and has always taken a

very pardonable pride in it, and now to lose this very important item of her beauty was a sore trial to her. She would have been willing to undergo any treatment, no matter how troublesome or painful it might be, so long as it promised to restore her former figure.

I explained to her the circulation of the blood in the breasts and the course of the lymphatic vessels, so that she might appreciate the importance of following my directions as to the massage. The main idea is to begin the movement on the lower and outer side of the breast, and rub in a curve inward and upward. The whole palm of the hand must be used, and the touch should be gentle yet firm. This massage may be given to both breasts at the same time, it is well to devote to it from five to ten minutes morning and evening. The hands must be kept constantly dampened with Dr. Charles' Food.

This patient was thoroughly in earnest, kept up the massage persistently, and within a few months she told me that her breasts were as full, found and firm as they had ever been.

Case II.—Mrs. Nellie O., age 24. Her case was very similar to the one above cited. She had borne two children, and they had both died. A few months after the death of the last one she noticed a diminution in the size of her bust; her neck and chest were becoming lean and scrawny, and her breasts were small and pendulous. There were dark areolae around the nipples, although she is of a rather fair complexion.

She was much distressed about the matter, as was also her husband for she has a small, compact figure, and her bust, although never of great size, had formerly been firm and beautifully rounded.

I gave her careful and minute instructions in regard to diet, exercise, bathing, massage, etc., and prescribed the use of Dr. Charles' Flesh Food.

The patient carried out the treatment faithfully, coming to my office now and then to report progress. The careful mode of life I insisted upon built up her general health, and the flesh food greatly hastened the development of the parts to which it was applied. Within a few months her chest and neck had filled out very noticeably, the breasts were plump, and the dark areolae about the nipples had changed to a pink color.

Case III.—Miss Cora D., age 20. She was a "skinny" girl, with a long neck and poorly developed chest. The breasts were small and flabby.

First of all I had to correct her diet, and give her a tonic to restore her general health. At the same time I instructed her in some gymnastic exercises and deep

breathing. On the neck, bust and breasts she applied Dr. Charles' Flesh Food daily.

Her development was very rapid; the chest measurement increased, and it now looks full and womanly, with graceful curves in place of the former hollow and angles. The breasts have not yet increased greatly in size, but they are firm and round.

If space permitted I should like to relate several cases in which I have seen thin, flabby arms develop under this same treatment, and dried-up hands fill out; but the principle is the same, and the treatment is applicable to all parts of the body.

VARICOSE VEINS OF THE LEG.

By John S. Moremen, M. D., Louisville, Ky.

Every now and then in the course of ordinary general practice one comes across a case of this disease, but in the dispensary practice of a large city it is very common. It occurs most among those who are poorly nourished, although in many instances the patient is fat and seemingly strong. The class who suffer most with this condition are those who are obliged by their occupation to remain standing for many hours a day. Thus employes in stores are often affected. It also occurs in people who have to walk a great deal, such as peddlers and soliciting agents who go from house to house. Walking, however, is not nearly so conducive of varicose veins as is standing still.

The trouble arises primarily from weakness of the circulation. In nearly every case it will be found either that the heart is weak or that there is some affection of the heart valves which keeps the pressure of the blood below normal. The principal factor in the maintenance of a proper flow of blood in the veins is the "vis a tergo," the pressure from behind. If the arterial pressure is low the venous circulation must always be poor.

The walls of the veins have to sustain the weight of all the blood above them, and in the feet and legs of a person standing up this is considerable. The walls of the veins are weak and delicate; they are reinforced by the tissues which surround them. When these tissues are firm and healthy the veins can never expand beyond a safe limit; but when by disease and poor nourishment, the muscles, skin and other elements become flabby they do not furnish sufficient support, and the veins expand indefinitely.

The valves are placed in the veins to help support the weight of the blood above, but it often happens that the valves become so disordered that they fail to close properly. Furthermore, after a vein has expanded beyond a certain point the valve is too small

to reach across it, and is of no service at all.

When one is walking, the muscles of the legs and feet are alternately contracting and relaxing. The contracting muscles press upon the veins and force the blood upward. The valves keep it from returning, and when the muscles relax the blood from below fills the veins again. This is a very important help to the venous circulation, and it is for this reason that those who walk are not so liable to diseases of the veins as those who stand still.

A slight amount of varicosity gives rise to no symptoms, as a rule. When the swelling is greater the stretching of the skin produces pain; in chronic cases the skin over the varix is usually subject to a slow sort of inflammation. This is often accompanied by itching and burning, and is sometimes very painful. The skin may finally break down entirely, and an ulcer forms. In some cases, when the condition is neglected, the ulcer may eat its way deep enough to open the vein. This gives rise to severe and often dangerous hemorrhages.

There are cases in which there is no apparent inflammation of the skin, but it becomes gradually stretched more and more over the growing varix, and finally gets so thin that it ruptures.

The tissues in the walls of a varicose vein are always more or less degenerated. This happens whenever the circulation is habitually slow, whether the vein is allowed to expand or not. This degeneration is a further source of weakness to the vessel, and the weaker it becomes the more it relaxes.

From these considerations the indications for treatment are plainly seen. In the first place the weakened parts must have some artificial support until they can regain their normal tone. Then, the circulation of the blood must be quickened, so that more nutriment may be brought to these diseased spots. The blood must be enriched with the elements needed for repair; and the general health of the patient must be brought up to as high a point as possible.

As to artificial support to varicose veins, that ordinarily used is a bandage, preferably of flannel. It should be begun at the toes and carried well above the varix. For a more permanent effect an elastic stocking is often worn. They can be obtained to fit any part, and are very useful and convenient.

Another form of support is the application of a mixture of glycerine, 25 parts; gelatin and zinc oxide, each 15 parts; water, to make 100 parts. It is made up as follows:

The gelatin is put into a vessel and the water poured over it. This is allowed to

stand, and is turned over once in a while until all the water has been absorbed and the gelatin is uniformly soft. Then it is heated over boiling water until melted. The glycerine and zinc oxide having been mixed together are now poured in and the whole mass thoroughly stirred. On cooling, this preparation will set into a solid form, and has to be melted whenever it is to be used. It is applied to the skin with a brush, and can be put on as thick as one sees fit. A little raw cotton can be dabbed on the surface before it gets dry.

This dressing was invented by Dr. Unna, a famous skin specialist. Its principal advantage is that it does not heat the part; in other words, the perspiration is not dammed back into the skin and the part does not become inflamed. When this mixture dries it is not sticky, and can be worn several days without discomfort. It can be washed off with warm water. The zinc oxide which it contains tends to allay any irritation of the skin. In drying it shrinks, and thus supports the part more thoroughly. Before applying it the leg should be elevated so as to allow most of the blood to escape from the varix.

For improving the circulation of the blood, even when the fault lies in a valvular lesion of the heart, there is nothing quite so good as anasarcin. This is a compound of vegetable stimulants and alteratives which, although comparatively new, has long ago passed the experimental stage, and is now universally recognized as a remedy of great merit. One of its best features for cases of this sort is the fact that it counteracts the degenerative processes in the vessel walls, and greatly improves their tone.

Although the anasarcin alone is usually sufficient. If the patient seems to need any additional tonic the glycerophosphate of lime may be given, or a mixture of the glycerophosphates of lime, soda, potash and iron.

Abstracts and Selections

EARLY DIAGNOSIS OF MALIGNANT DISEASE.

A. A. Landry (New Orleans Medical and Surgical Journal) gives the following characteristics suggestive of early malignancy of tumors of the uterus, stomach, and breast: (1) Rapid growth (2) Tendency of the tumor to invade surrounding tissues. (3) Pain, spontaneous, and of a lancinating and paroxysmal character, was long considered characteristic of malignancy, but is misleading. Pain is not character-

istic of early cancer. (4) Too much importance should not be given to retraction of the nipple in cancer of the breast. Redness, edema, nodular development, ulceration, involvement of lymphatic glands, and the development of the characteristic cachexia are late symptoms which should not be waited for before having recourse to radical treatment. Early examination in suspected cancer of the uterus and an early resort to exploratory operation in suspected cancer of the stomach are to be recommended.

THE SAHLI DESMOID REACTION.

Eicheler (Berlin Klin. Wochenschrift) conducted a series of observations on some thirty patients, with a view to testing the value of Sahl's desmoid reaction. This reaction is based on the fact that raw connective tissue fibres are digested in the stomach only and there when the secretions of pepsin and hydrochloric acid are relatively normal. Sahl recommended the ingestion of small rubber bags containing methylene blue, and the bags tied shut with raw catgut. As soon as the catgut is digested the methylene blue or iodoform is liberated and soon makes its appearance in the urine. It should appear within twelve to eighteen hours. If the secretions are not up to normal, then the catgut is either not digested at all and the little bags are expelled with feces, or is digested very slowly and the methylene blue makes its appearance in the urine at a much later period. He found in his series of investigations that the Sahl method is very reliable and corroborated his findings by a comparison with the chemical findings in the stomach contents.

FRACTURES—UNION HASTENED BY CONGESTIVE HYPEREMIA.

The rubber band around the limb, proposed by Bier to check inflammation, has been used by Deutschlander (Centralblatt für Chirurgie) to aid the union of fractures in unfavorable cases. The first case in which he used it was one of infantile osseomalacia, to hasten the union of fractures made purposely to correct angular deformity. The results were so good that the method was used in nine cases of fracture near joints with excellent results. Pain was lessened, the formation of callus hastened, and in no case was there interference with the mobility of the neighboring joint.

He intends hereafter to use the band in all cases of fracture in the limbs, applying it six to eight hours a day, with a pause at noon. This is rather longer treatment than is indicated in inflammatory processes.

THE NEW ALBANY MEDICAL HERALD.

MAY, 1907.

Old Series Vol. XXV, No. 337. New Series Vol. XIV, No. 188

GEO. HANLON BAY, M. D., Editor.

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EDITORIAL.

CHOREA.

This is an acute disease chiefly affecting infants and children. It is characterized by the contraction of certain muscles or groups of muscles in an irregular manner, and is wholly involuntary. In many cases there is a certain amount of mental disturbance. It seems in some way to be allied to acute endocarditis, for the two diseases are very frequently found simultaneously.

The term chorea was first applied to a totally different disease, and it is very unfortunate that Sydenham used the name for the acute affection of children to which it is now universally given. The original chorea, or St. Vitus' dance was a nervous affection brought about by religious excitement. The victims talked loud and long, they used violent gesticulations and danced in the churches and in the streets. This went in epidemics over Europe during the

Middle Ages, and for the relief of it the sufferers were often sent on long pilgrimages. One of the favorite shrines to which they resorted was that of the good St. Vitus, in the province of Zeburn. By meditating and praying in the soothing quiet of this old chapel the patients regained their wonted repose. This was a species of hysteria, and similar affections are reported from time to time even in these days.

The chorea of children is totally different from this, there is no connection with hysteria. In many instances the mother dates the beginning of an attack from some fright or other emotional disturbance, and although it is hard to prove that this is the cause of any particular case it is probably often so.

The strain of sitting pent up in school, and the overstrain in children who are ambitious in their studies is one of the most frequent of causes. Striving for prizes and class honors is responsible for most of it, and the vanity of parents who urge their children on to efforts greater than they are safely able to make. As might be supposed the disease is more frequent among girls than boys. It is commonest also, between the ages of ten and fifteen, when the girl's sexual organs are developing. She needs all of her vitality for these physiological changes, and the strain and confinement of school are too much for her nervous system.

Chorea occurs chiefly among families who inherit a tendency to nervous troubles whose nervous system is unstable. The disease is probably one merely of function, as careful post-mortem examinations of people who have died while suffering from the disease have shown no lesions which are present in every case.

Many other theories have been advanced as to the cause of this queer disorder. Its frequent connection with endocarditis, and with pain and swelling in the joints gave rise to the theory that it was caused by small emboli which lodge in the capillaries of the brain. In some cases such emboli have been shown to exist, but in others the most careful search has failed to disclose anything of the sort.

A case of chorea may come on soon after one of scarlet fever, especially when the joints have been much involved; it is a common sequel to rheumatic fever. Other febrile diseases which involve the joints, such as pyemia, gonorrheal rheumatism and puerperal fever, are frequently followed by chorea. It often comes on during pregnancy, and sometimes just after childbirth.

When we consider the following facts, that the child has prodromal symptoms, frequently suffers from pain in the head and back, sometimes has an elevation of temperature, and often has joint symptoms, we find that the picture resembles an acute infection,

and some excellent physicians hold this opinion. The patient frequently recovers without treatment, which also lends color to this view.

Up to date no positive proofs for any of these theories as to its origin have been found, and so the matter can not be considered as settled. In the meantime we had better consider it merely a functional trouble, a state in which the muscular impulses are partially unbalanced and uncontrolled.

We may have chorea of every grade of severity, from merely a slight awkwardness in the use of the hands to the wildest delirium.

Before an attack the child may be restless and "fidgety" for a few days; she sometimes has crying spells. Her disposition may change; a bright, agreeable child may become gloomy and sullen. There may be headache and pain in the back and legs. The irregular movements begin usually in the hands and arms, the patient has trouble in feeding herself on account of her liability to drop whatever she has in her hands. One hand or one side of the body only may be involved; generally both. The power of speech is affected on account of the irregular action of the muscles of the tongue and lips. In a mild case the patient merely hesitates or speaks slowly, while in severe cases talking is impossible.

In a bad case the patient has difficulty in getting about, in dressing or undressing, or performing any other complicated action. The condition is a truly pitiable one, for the limbs and face are constantly jerking, and she can do nothing but lie on the bed and suffer. Fortunately the movements usually cease during sleep.

As stated above some cases recover without treatment, but this is no excuse for neglecting any patient, for a mild case may progress into a bad and even fatal one. It should be taken in hand early and treated with care and judgment. As in all nervous diseases it is hard to lay down any hard and fast rules for treatment; the functional cases are often the most puzzling.

Among the first considerations are the general health, the diet, the hygiene, and the physical and moral surroundings of the patient. Some of these matters can not be regulated, but a great deal can often be accomplished by persistence and firmness.

As the disease is one of nervous excitement it is plain that some kind of sedative is indicated. One of the remedies frequently used is arsenic, and mild cases often recover under its administration. When the case is severe this drug is not strong enough—the bromides are needed. The best of this class is bromidia, which contains other calmative and tonic ingredients in addition to the bromide of potassium. Sufficient doses of this will calm any case and bring

the much needed sleep during which the patient rests from his constant jerkings. Arsenic may be given alternatively or in connection with bromidia.

JUST ABOUT DOCTORS.

There are many kinds of doctors—allopathic, homeopathic, and mongrel, says The Interview. Luckily, every family swears by its own, and believes in nothing beyond his dictum. There is your exclusive doctor who lives in a fine house, rides in an automobile to his "cases," with a chauffeur in livery; utterly eschews all out-of-the-way localities, and never troubles himself to go out when his head aches, or in bad weather. His manner of drawing off his gloves is pompous and impressive. Nurse, in the corner, sinks down into her slippers utterly awed by it. While he warms his hands silently, he is impressing all present with an idea of his immense profundity. This done, he fixes his eyes on the ceiling and counts his patient's pulse; then comes the tongue examination, after which he relapses into another profound contemplation of the ceiling, during which time every tick of the clock seems solemn as fate. Then follows the cabalistic writing, a dead letter to everybody but this Grand Mogul and the apothecary. The gloves are then drawn on, and bowing to the thin air, our elegant doctor delivers himself again into the care of his liveried servant.

Then there is your old-fashioned doctor, whose patients "will have him," though he has wanted gradually to leave off practice for several years, in favor of new aspirants. The cut of his coat is a matter that doesn't affect his practice. He smiles blandly, as the other doctor with the liveried servant wheels past, while he trudges independently on foot, and mentally shakes his head at "new fashion." He is civil without regard to externals. A baby is a baby to him, whether it comes into the world with a nice wardrobe ready for its back, or the contrary. He is perfectly willing to tell a man who places his stomach in his care what he is going to put into it, and what he expects it to do for him. He is interested philanthropically, as well as scientifically, in the most minute symptom of the most ordinary patient, who is encouraged by the sympathetic magnetism of his voice and eye to tell him just how he prescribes; he scribbles no unnecessary prescriptions for his own benefit or the druggist's, and speaks so cheerfully when he leaves that the sick man half doubts after all whether anything is the matter with him.

Then there is your young, new-fledged doctor, who gives physic as a little boy lets off

a cracker, rather uncertain whether it will blow him or his neighbor, or both, sky-high.

Then there is your ladies' doctor, "the handsome man," who lifts his eyes with well-acted astonishment that these dear beings can endure a pain, or an ache, and still live; who says just what they want him to say in the way of prescribing "sea air" and savory viands; and coaxes all their little troubles over their lips till they are more astonished at themselves than the doctor is at them.

Then there is your blunt pop-gun doctor, who has no time nor inclination for nonsense, but jerks out his opinion at once, and they who don't like it need not consult him again; who feels your pulse, and pronounces you a prospective dead man or woman as coolly as if the intelligence concerned you no more than himself.

Then there is the eccentric doctor, who advertises himself by some peculiarity of costume, and is never better pleased than when everybody is saying, "Who can that be?"

Finally, and lastly, it is all very nice to laugh at doctors when one is sound and well, but let a good, smart pain come, and none so ready as those who do so to send a telephonic summons for their speedy appearance. With this substantial proof of their power, let them snap their fingers at criticism, and be jolly.

Some of us remember an Oriental story of a certain prince who had received from a fairy the faculty of not only assuming whatever appearance he thought proper, but of discerning the wandering spirits of the departed. He had long labored under a painful, chronic disease, that none of the court physicians, ordinary or extraordinary, could relieve; and he resolved to wander about the streets of his capital until he could find some one, regular or irregular, who could alleviate his sufferings. For this purpose he donned the garb and appearance of a dervish. As he was passing through one of the principal streets he was surprised to find it so thronged with ghosts that, had they been still inhabitants of their former earthly tenements, they must have obstructed the thoroughfare. But how amazed and dismayed he was when he saw that they were grouped with anxious looks around the door of his royal father's physician, haunting, no doubt, the man to whom they attributed their untimely doom!

Shocked with the sight, the prince hurried to another part of the city, where resided another physician of the court, holding the second rank in fashionable estimation. Alas! his gateway was also surrounded with reproachful departed patients. Thunder-struck at such a discovery, and returning thanks to the prophet that he was still

alive, despite the practice of these great men, he resolved to submit all the other renowned practitioners to a similar visit, and he was grieved to find that the number of ghosts kept pace with the scale of their medical rank.

Heartbroken, and despairing of a cure, the prince was slowly sauntering back to the palace, when, in an obscure street, and on the door of an humble dwelling he read a doctor's name. One single, poor, solitary ghost, leaning his despondent cheek upon his fleshless hand, was seated on the doctor's steps.

"Alas!" exclaimed the prince, "it is then too true that humble merit withers in the shade, while ostentatious ignorance inhabits golden mansions. This poor, neglected doctor, who has but one unlucky case to lament, is then the only man in whom I can place my confidence."

He rapped, and the door was opened by the doctor himself, a venerable old man, not rich enough perhaps to keep a domestic to answer his infrequent calls. His white locks and flowing beard added to the confidence which his situation had inspired. The elated young man related at full length all his complicated ailments, and the still more complicated treatment to which he had in vain submitted. The sapient physician was not illiberal enough to say that the prince's attendants had all been in error, since all mankind may err, but his sarcastic smile, the curl of his lips, and the dubious shake of his hoary head most eloquently told the anxious patient that he considered his former physicians as an ignorant, homicidal set of upstarts, only fit to depopulate a community. With a triumphant look he promised a cure, and gave his overjoyed patient a much-valued prescription, which he carefully confided to his bosom, after which he expressed his gratitude by giving the doctor a purse of golden sequins, which made the old man's blinking eyes shine as bright as the coin he beheld in wondrous delight. His joy gave suppleness to his spine, and after bowing the prince out in the most polite manner, he ventured to ask him one simple question: "By what good luck, by what kind planet have you been recommended to seek my advice?"

The prince naturally asked for the reason for so strange a question, to which the worthy doctor replied, with eyes brimful with tears of gratitude: "Oh, sir, because I considered myself the most unfortunate man in Bagdad until this happy moment; for I have been settled in this wealthy city for the last fifteen years and have only been able to obtain one single patient."

"Ah," cried the prince in despair, "then it must be that poor, solitary, unhappy-looking ghost that is now sitting on your steps."

HERPES.

The word herpes is an old one, and has been applied to several different diseases. It is derived from a Greek word which means "to creep." Probably it was first given to some affection which spread from one part to another; possibly to herpes zoster, which sometimes starts near the spine and progresses forward over the sides.

There are three kinds of herpes—the facialis, genitalis, and herpes zoster. The term herpes labialis was too restricted, for although the facial variety is often confined to the lips it sometimes extends over the surrounding parts. In a like manner the old term herpes prepucialis did not include the numerous cases which appear on the glans and on the body of the penis, as well as on the scrotum. The female genitals are also liable to the disease. Herpes zoster is probably a distinct affection, and quite different in its origin. It will be referred to later.

The distinguishing features of herpes are: First, vesicles, and, second, groups of these. An ordinary "fever blister" is a good example. It begins with a slight itching and a feeling of tension on the lip; after a few hours a raised, red spot is visible, and the itching increases. A little later on this spot is seen to be covered with tiny, colorless vesicles. These grow in size until they are easily perceptible, and sometimes even form small blebs. In a day or two the watery, serous contents changes to pus, the walls break, the raw surface dries, and soon heals over. The case is now at an end, unless some of the pus chances to infect the skin it touches. In such a case a new blister is formed, and successive crops may come on indefinitely.

If the parts are not kept clean and the patient scratches them other germs may be added, and the surrounding skin is then given what is known as a mixed infection. This causes an impetigo which may spread by scratching to all parts of the body. This disease will continue until adequate means are taken to cure it.

Persons who are subject to facial herpes will often have a series of attacks at short intervals. The least deviation from normal health will bring it on, and a chill and a rise in temperature is sure to be followed by a crop of vesicles all over the lips. Some women have herpes with almost every monthly period.

Genital herpes is seen much more commonly in the male than in the female. There is a period of slight burning and itching which precedes the appearance of a raised and inflamed area. The vesicles then appear, and there are often several groups of them, at the same time. These attacks

are very liable to follow any sexual excess, especially when the man has also been drinking heavily.

In many cases the diagnosis is very difficult, for the attack is rarely seen in the beginning. After the vesicles rupture the raw surface is affected by the heat and moisture of the parts, and is almost invariably infected by pus microbes. Such an area is hard to distinguish from a soft chancre. Practically it matters very little, as a rule, because the soft chancre, or chancroid, is not a serious affection. But in cases where it is important to make a diagnosis a little of the secretion of the sore may be inoculated into the patient's thigh. If there results merely a temporary redness it was herpes, but the chancroid virus will produce a typical chancroid wherever it is sown.

Herpes zoster has been studied very carefully of late, particularly in some charitable institutions in England. Cases were recorded, and when the patient died, no matter how long afterward, a post mortem examination was made. In practically all instances a lesion of some kind was found in the ganglion attached to the posterior root of one of the spinal nerves. The nerve fibers were always found to have degenerated. This accounts for the neuralgia which usually accompanies this disease, particularly in old people.

The diagnosis of zoster on the body is easy, but when it is found on the face, head or limbs it is not always recognized at first. Some cases which are characterized by severe neuralgia will show only one or two small groups of vesicles, and there are possibly cases which show no external sign; These, of course, are not diagnosed.

The treatment of herpes on the face consists in keeping the part scrupulously clean and in trying to prevent the vesicles from rupturing. This latter is almost impossible on the face, where a protective dressing can not be worn. To prevent the spread of the infection, as well as to allay the itching, the best application is resinol ointment. Various antiseptic powders are also used.

The same may be said of the genital cases; cleanliness, washing with resinol soap, and the application of resinol ointment or of antiseptic powders are all that is required.

The vesicles of zoster, being in a better position to dress, can often be kept from rupturing. A cloth covered with resinol is applied and kept in place by a bandage. Treated in this way the disease gives very little trouble; the vesicles merely dry up and the scale comes off later.

For the neuralgia we often have to give some of the coal tar derivatives, or even morphine. Electricity has done good in some cases.

WHAT SHOULD WE TEACH THE PUBLIC REGARDING VENEREAL DISEASE.

Dr. George Whiteside, in the Journal of the American Medical Association, says:

Let us briefly consider, first, what we do teach regarding venereal disease; second, what deduction the average layman draws from information received, and, third, in what way our teaching may prevent the spread of infection.

As physicians we teach the public by precept and by example; we do not give systematic lectures or demonstrations to laymen; we give brief and fragmentary personal talks to our own sons (generally not to our daughters); to the children of our patients occasionally, but generally after the acquirement of disease and not before; very occasionally a few lectures are given to young men as members of a college or school or church, but never, to my knowledge, to young women. Now and then one learns of a class of men being instructed in methods of prophylaxis. That is all, except such fragmentary individual instruction as the physician gives to his venereal patients. What can we expect the public to learn from us in such a variety of unconnected and unsystematic ways?

I think we may expect just what we know to be the results. They may be summarized as follows:

The average boy is wide awake, bright, of inquiring mind, and credulous. The average young man is his instructor and teaches him that gonorrhea is no worse than a cold in the head; that chancroid is due to filthy habits and can be entirely avoided by bathing, and that syphilis is a rare and loathsome affection which is absolutely incurable.

We know these to be in brief the opinions held by thousands of intelligent laymen, and we know them to be from first to last untrue.

The average girl knows nothing of venereal disease. When she becomes a young woman she either remains in this blissful state of ignorance, or, if she becomes intimate with low companion, she is taught by them to believe that gonorrhea is not virulent in the female; that its worst consequence is leucorrhea. With regard to chancroid and syphilis she believes the same misinformation given above.

We know these versions of the story to be also untrue to fact. These beliefs are the result of lack of intelligent instruction. On the other hand, of how much benefit would it be to humanity to know the truth? I believe very little, indeed. If people were taught gonorrhea is sometimes mild, transient and easily cured and at other times severe, protracted and difficult to cure, where would the advantage be? Would any given

individual hesitate longer before exposing himself or herself to infection?

If people believed syphilis to be, under careful treatment, mild and almost certain to be cured, would it encourage chastity?

These diseases have been prevalent since the earliest times of which history tells us; men of all races, of varied intelligence, of all religions, of all schools of medicine, have thought, written and spoken on this theme. Nothing new can be said on the subject. Very likely in Pharaoh's time some Egyptian or Arabic medical society held just such a symposium on the subject as we to-day. What has come of the effort of centuries? Is venereal disease less prevalent to-day than then? I think not. Our enlightenment has not exterminated it.

I believe that effort to stamp out venereal disease by giving instruction regarding its nature, natural history, sequelae and amenability to treatment is time wasted. So long as men desire, women and men reciprocate, venereal disease will exist, and that will be as long as there are men and women in the world. The love of honor and justice, or the fear of evil, will always deter some, but not all, from venery.

According to the most modern ideas, it is now thought best to try to reform vice by attacking it in a previous stage. This axiomatic epigram appears in a monograph, entitled "Alfalfa in the Willamette Valley," by W. W. Cotton. In speaking of seed and seeding he describes a vine called dodder, which is a parasite of the alfalfa plant. Mr. Cotton says: "The proper way to avoid dodder is not to plant the seed." How simple this statement, and yet how all comprehensive! To paraphrase it we may here say that the proper way to avoid venereal disease is not to plant its seed. That is the modern method—to look forward and not back, to train the child in order that the next generation may be cleaner and more manly than the present one.

We must rely on the prophylactic value of very early education. If the anatomy of the sexual organs and their physiology and use were taught by every mother to her young children as soon as they are old enough to understand at all; if we did not wait until puberty, but began at three or four or five years of age, would it not be better?

It is the mystery that shrouds the subject that renders it attractive. It is the secrecy of his elders that piques the curiosity of the child. A reasonably full explanation that satisfies the young mind's thirst for knowledge will dissipate the fog of mystery and render the subject no longer interesting.

Later, about the time of puberty, desire appears as a tempter. It is the strongest and most natural instinct of our natures, the instinct which leads us to wish to pro-

create, to regenerate the race. This can never be repressed. Education will not eradicate sexual desire. Should it do so, the species would eventually become extinct.

Teaching and example may sometimes guide and train the mind to control the desires of the flesh until reason releases them and allows sexual passion an outlet. Such teaching should inform the mind of youth of the energy which should be potential. It should advise habits of cleanliness, both mental and physical, and should picture the possibilities of venereal disease. This last should not be overdone. The fear of the contraction of disease deters only the cowardly, and these it often drives to the unnatural outlet of masturbation. Certainly venery is preferable to the mental degradation of the other vice.

Boys of fifteen or sixteen may be taught the symptoms, nature and results of gonorrhea, chancroid and syphilis, and the importance of proper treatment and how pernicious amateur tinkering is. This should not be done to frighten them, but simply as information. It is best done by the parents or by the family physician, or in case of public school-boys, whose home influence is sometimes not of the highest order, by some physician appointed to lecture to them on the subject. This latter method is probably the least beneficial.

In later life among mature men, such teaching is certainly less effective. To prevent venereal disease and to lessen the number of cases of it in the community, lectures on prophylaxis are undoubtedly of value for a time until men by habit become careless. Lectures on anatomy, physiology or symptomatology do not restrain or regulate the desire of mature individuals. Lectures on the curability of not only acute but chronic venereal disease and even on the remote results dissipate the erroneous ideas before mentioned. Whether such knowledge is conducive to public happiness or not is another question.

Does it do good to teach the frequency of epididymitis or stricture or to explain the causative relation of gonorrhea to ophthalmia neonatorum or pyosalpinx? Would gonorrhea be less frequent if it were generally known that a specific urethritis can not be contracted from a non-infected woman during the menstrual period, that intromission is not necessary for infection, that varicocele rarely produces sterility, and that physiologic seminal emissions are not a sign of impotence?

The education of our girls is a different matter. They should understand their anatomy and physiology, but let us spare the sympathetic sensibilities of girls of the better class. Why tell them of venereal disease or loathsome perversions of sexual de-

sire? Girls who must protect themselves, who unfortunately have no one to look out for them, should be as well informed as the boys are. They must be taught the danger there is for them in drink, because it leads to venery, the possibility of conception and the crime of abortion. They should be taught these things by their mothers, or, if that is not possible, by some high-minded woman physician.

The parasites known as gonorrhea, chancroid and syphilis are as destructive to the human body as the dodder vine is to the alfalfa plant, and our axiom is that "the proper way to avoid dodder is not to plant the seed." Let us, therefore, prepare the soil of the mind by well-chosen education begun very early and continued into adult life, because in that way we may best avoid venereal disease by teaching the youth or maiden not to plant the seed and also by giving it no encouragement to grow.

Whether or not such methods will better the condition of the world to-day is doubtful, but if we do not try it we can not find its sphere of usefulness.

Abstracts and Selections—Continued.

SURGICAL TREATMENT OF PARALYSIS

The types of cases discussed by Tubby (British Medical Journal) are those arising from anterior poliomyelitis, spastic paralysis, ischemic paralysis and some traumatic lesions of the nerves. The modern methods of treatment discussed are tendon and muscle transplantation, arthrodesis and nerve anastomosis. Among the cases reported by Tubby are the following: Grafting the extensor proprius pollicis into the tibialis anticus, and part of the extensor longus digitorum into the internal cuneiform bone for paralytic equino-valgus associated with paralysis of the tibialis anticus; partial paralysis of the extensor cruris; insertion of the ilio-tibial band into the patella, which was followed by complete recovery of the power of extension of the leg; grafting the distal facial trunk for traumatic facial paralysis into the hypo-glossal.

GENERALIZED BLASTOMYCOSIS.

C. Christensen and L. Hektoen (Jour. of Amer. Med. Ass'n) give detailed histories of two cases of disseminated blastomycosis. In both the onset was sudden and without the presence of any chronic external lesion that might be regarded as the primary localization. In the first case, the cutaneous and subcutaneous lesions developed simultaneously after an acute febrile attack, and suggest the lungs as the portal of entry of the

infection. In the second case, the localization of the infection seems to have been in the deeper tissues before the subcutaneous invasion. The authors suggest the advisability of experiments to determine whether the organisms are easily conveyed by air currents when dry, whether they retain their vitality and infectiousness after drying, and whether or not they are carried in minute droplets of sputum. The peculiar predilection for the skin possibly indicates an important avenue of escape of the germs it may be to new hosts. The authors also suggest the possibility of infection of skin lesions by way of the blood current and not always, as seems to have been supposed, by direct implantation from without. No effective treatment has yet been devised in these cases the authors tried a sterile vaccine prepared from the blastomycetic organism, with the idea of stimulating opsonic action according to the method of Dr. A. E. Wright. Unfortunately, the patients passed from their observation, leaving the hospital before any definite conclusion of value could be drawn as to the result of this treatment. Work is now being done to develop certain methods by which the effect of the blastomycetic vaccines can be tested in vitro, so as to furnish some guidance in the treatment of the disease.

THE MEASUREMENT OF THE CAPACITY OF THE RENAL PELVIS.

Luys (*Annales des Maladies des Organes Genito-Urinaires*) passes a ureteral calculus to the pelvis of the kidney. When the urine which has been there contained has escaped by means of a graduated syringe which accurately fits the outer end of the catheter he injects boric acid until the patient begins to feel pain in the kidney. This usually occurs quite suddenly, and when two to five cubic centimeters of the solution has been injected. The quantity necessary to produce pain is an index of the renal capacity. This measurement may be of extreme value from a diagnostic and operative standpoint, since it affords a means of determining whether or not a greatly enlarged kidney exhibits this increase of size from dilatation at the pelvis or from overgrowth of the renal parenchyma.

DIAGNOSIS OF PANCREATIC DISEASE.

Taylor (*Lancet*): Destructive diseases of the pancreas are accompanied by fat-necrosis as a result of which the fat is split into fatty acids and glycerin. The latter or its derivatives appear in the urine and may there be recognized by means of Combridge's test.

MEDICAL GLEANINGS.

Little is known of poisons formed in the body, their excretion and reabsorption; but cathartics relieve malaise. Why?

Dr. Garrod employs chloral hydrate, two to five grains every hour during the asthmatic fit, in bronchial asthma of children.

It is not considered scientific to call every lesion of the genitalia a chancre. In many cases it is not.

Liquid extract of cascara sagrada precipitates with water, but if a little spts. ammon. aromat. be first mixed with the water no turbidity results.

To break the chill of ague at once, inhale a few drops of amyl nitrite from handkerchief, until the face reddens; the chill will then break into a sweat and end.

In cardiac hypertrophy cactus grandiflorus may be called for when the heart's action is much excited, with a sensation as if the heart were grasped or constricted.

It is not the venereal diseases that are so much to be feared as their consequences. These latter are the ones that have struck so much terror in the lay mind, which is quick to observe and appreciate their seriousness without any explanation.

Kraft refers to the uses of urine therapeutically, by emigrants, for baby's sore mouth, for "sore eyes," and other purposes. Every body probably knows the efficacy of urine in curing chapped hands.

Ichthyol ointment, 25 to 50 per cent., is perhaps the most useful single ointment medicament in aborting early superficial inflammation, infections, boils, etc. The addition of a few drops of oil of citronella to the ichthyol ointment robs it of its disagreeable smell.

For gastrectasis, W. H. Welch advises stomach washing and a diet small in bulk, nutritious, easily digested and not readily fermenting. Drijardin Beaumetz gives five grains each of betanaphthol, bismuth, salicylate and calcined magnesia before each of the two principal meals.

In an excellent article on "Treatment of Rheumatism," by Dr. W. E. Deeks, of New York in the New York Medical Journal, the author says: "One of the most marked features about the history of young people who are suffering from damaged hearts, resulting from acute rheumatic attacks, is the prolonged use of excessive sweet diets through pernicious artificial foods or foolish indulgence in confectionery, and the attendant stomach disorders. The writer has never failed to obtain such a history if the patient or the relations were closely questioned."

The question of whether a physician who agrees to conduct a confinement for a specified sum is entitled to increase his charge if the delivery is a multiple one, was recently made the subject of judicial decision in a Long Island court. In the case in question triplets were born, but the father refused to pay more than the honorarium originally agreed on. The court denied the right of the obstetrician to augment his fee on this account, but decided that an additional sum should be paid to compensate for the greater quantity of dressings, etc., consumed.

The Rubber Teat and Jaw Deformities are dwelt upon by T. F. Pedley (Brit. Med. Jour. Oct. 20, 1906), who points out the damage done to children by the use of the "baby comforter." The child feeding at its mother's breast does not suck the milk, but squeezes it out by the pressure of its jaws; in fact, it drinks rather than sucks. With the rubber teat, on the other hand, the child sucks—which quite differently affects the development of its mouth. The habit of mouth breathing and the deformities of the teeth and jaws, so evident to pediatricists, are in a large measure due to the artificial feeding of infants with bottle and rubber teats and the use of the dummy teat or "comforter." The latter should be banished from the nursery; and children who can not be breast-fed should be spoon-fed.

In the wasting diseases, as well as in rickets, scrofula and marasmus it is of the great-

est importance that a remedy be selected which will quickly check the pathological condition, and restore the organism to the normal without producing digestive or other functional disturbances. Cod liver oil has always stood first in the category of remedies calculated to bring about this desirable result, but unfortunately its peculiar odor and taste are features which are quite often objectionable to patients. Hagee's Cod. Ol. Morrhuae Comp. is an elegant preparation, containing all the essential therapeutic properties of cod liver oil and combined with tissue building chemicals (hypophosphites of lime and soda) and aromatics, which renders it agreeable to the palate, says the American Jour. Dermatology.

J. H., Cincinnati, O., writes to the editor of The Coca Leaf: "Following a suggestion in The Coca Leaf as to the depurative action of coca, I have used Vin Mariani to assist the elimination of uric acid, giving the wine either alone or alternately with the salicylates. I wish to express my appreciation of this remedy, which has opened a field of usefulness to me."

It is equally pleasant to record as to give kindly suggestions. Attention directed to the applications of coca, based upon its physiological action, will indicate many uses for this remedy which will prove satisfying to both patient and physician.

The indescribably depressing action upon the stomach, often complained of by patients who take salicylates, may be obviated by using Vin Mariani as a vehicle. Fifteen or twenty grains of salicylate of soda in two ounces of Vin Mariani affords a palatable and efficient remedy in the elimination of uric acid. This dose may be found serviceable twice daily, after eating, and again at bed time if indicated.—The Coca Leaf, March, 1905.

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Old Series Vol. XXV, No. 318.
New Series Vol. XIV, No. 189.

New Albany, Ind., June, 1907.

\$1.00 PER ANNUM.
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ORIGINAL.

IMPORTANCE OF EXACT DIAGNOSIS IN DISEASES OF THE STOMACH.*

By Charles W. Moseley, M. D., North Wilkesboro, N. C.

I have selected this subject, hoping that I might stimulate investigation in this important branch of internal medicine.

In the limits of this paper, I shall not attempt to go into details in regard to the technique of the various analyses proposed by different authors, nor enter into a discussion of the relative merits of different methods of examination.

The text-books of Ewald, Einhorn and Riigel will furnish sufficient discussion and direction along these lines. I do not propose to attempt a learned and elaborate dissertation on diseases of the stomach, but to intimate in a very informal way some of the advantages that may accrue to the internist and the diagnostician by utilizing modern methods of investigation. It is a self-evident proposition that diagnosis, when possible, should precede direction for treatment and should form the basis upon which to make a prognosis. A thorough knowledge of the various functions of the stomach, and the relative digestibility of the different foods were not well understood nor thoroughly investigated until Beaumont made his elaborate and careful observations on St. Martin. Since that time a host of observers and investigators have been working out and perfecting a system of diagnosis and treatment that is at the same time accurate, rational and scientific.

There is no department of internal medicine in which more rapid strides have been made and none in which the progress has been on more rational and scientific lines.

The functions of the stomach are three-fold. First, the secretory function; second, the motor function; third, the absorptive function.

Either one or all three of these functions

may be impaired at the same time, or there may be certain mechanical obstructions, either intrinsic or extrinsic, either benign or malignant. We should also be able to recognize gastropnoxis and other displacements of the digestive organs and the various neuroses of the stomach. In this difficult task of discrimination, it is important that we should know the secretory, motor and absorptive powers of the stomach, and not only these, but every method of gaining information should be exhausted before we reach a conclusion, and, after having made a careful and accurate diagnosis, we can prescribe rational therapeutics and a rational regimen.

When are examinations of the gastric contents necessary? They may be omitted whenever we are able to arrive at a positive diagnosis without them, and in all acute conditions. They are not necessary in chronic conditions which are improving, and in a majority of purely nervous affections. In cases where ulcer is suspected, the tube must be used with caution, and if there has been hemorrhage, the tube is positively contraindicated. Cases pointing to a certain secretory disorder (as hyperchlorhydria, gastro succorhea continua, periodia or chronica), may be first treated without a verifying examination of the gastric contents, but if this treatment prove unsuccessful, an examination of the gastric contents should be made.

Examinations of the gastric contents should be made in all chronic affections of the stomach with doubtful diagnosis that show but slight evidence of improvement.

These examinations may help us to recognize the following conditions:

*1st. Chronic Gastric Catarrh: Acidity diminished, the ferments present, free hydrochloric acid variable mucus present in large number of cases.

2d. Achylia Gastrica: Total absence of gastric juice, no hydrochloric acid, no ferments, total acidity low, almost neutral.

3d. Cancer of Stomach: In many instances incipient cancer of the stomach may be recognized by the constant presence of the following symptoms: Free hydrochloric acid absent, lactic acid present, acidity not

*Read before N. C. Medical Society.

*See Einhorn on Diseases of the Stomach.

specially low, sometimes increased, mucus, sometimes small amounts of blackish-looking blood and stagnant food.

4th. Hyperchlorhydria: Free hydrochloric acid present, acidity between 70 and 140.

5th. Gastro succorrhea continua chronica: Presence of about 60 to 140 cc. of clear gastric juice in the fasting condition.

6th. Erosions of the stomach: Presence of a few small pieces of the gastric mucus in the wash water of the stomach in the fasting condition.

7th. Ischo chymia: Presence of food in the stomach in the fasting condition.

The results of examinations of the stomach contents are useful to aid us in diagnosis, but are not to be depended on to the exclusion of other clinical methods. We should combine all the data at hand before arriving at a conclusion. In this way, they will be of considerable help to us.

The motor functions of the stomach may be tested in various ways. I will call attention to Leube's method, which is the oldest method. It consists in washing out the stomach six or seven hours after a large meal. Normally, the stomach is found empty at that time. When large quantities of food remain, it shows that the motor function is retarded. Washing out the stomach two or three hours after a smaller meal, like Ewald's test breakfast, may serve the same purpose, for normally the stomach is then found empty. The second method I will mention is examination of the stomach in the fasting condition. The best and easiest way to test the motor function of the stomach is to examine this organ by means of the tube and lavage in the morning in the fasting condition after the ingestion of a substantial supper the night before. It will be seen from the above that there is no difficulty presented in testing the motor function of the stomach.

The use of the stomach tube is also useful in helping us to differentiate between dilatation and stagnation due to simple atony of the stomach wall and dilatation due to stenosis of the pylorus.

Several hours after a meal in dilatation due to stenosis you would find, on aspiration, the fluids mostly escaped from the stomach and the food remaining would not be freely mixed with fluids, but in dilatation due to simple atony you would find a large quantity of fluids mixed with the food, owing to the weak expulsive force of the stomach walls. While the use of the tube is not imperative in the neuroses of the stomach, yet it often helps us, at least negatively, in establishing a diagnosis.

If, after repeated examinations, we are able to exclude any serious organic or functional disease, if we find the secretion of hydrochloric acid variable, and if the other

clinical symptoms corroborate these findings, we may reasonably conclude that we are dealing with a neurosis. In suspected gastroparesis, we have as an aid to diagnosis, inspection, inflation with air, inflation with gas, Kemp's stomach whistle and Einhorn's gastro diaphane. I have purposely avoided giving details in regard to examination of the secretory and absorptive functions of the stomach; the first is rather too lengthy for the limits of my paper, and the second is of minor importance.

After presenting to you in a general way some of the helps to accurate diagnosis, I desire to report a few cases showing the value of at least being reasonably certain in our estimate of the patient's condition.

Mr. A. was seen in one of the clinics of New York City three or four years ago. He was from Scotland and had been suffering from some form of stomach trouble for years. He had gone the rounds of the physicians of his acquaintance and had consulted a number of men of more or less distinction, being told that he had a severe case of indigestion. He had been given tonics, stomachics, laxatives, etc., ad nauseam, without getting any decided results. In fact, he seemed to be in the same condition as the woman who had the issue of blood mentioned in the Scriptures, of whom it was said: "She had suffered many things of many physicians and had spent all that she had and was nothing bettered, but rather grew worse."

The gentleman had lost his position as teacher in one of the colleges of his native land and had come to America discouraged and despondent. In this condition he presented himself at the clinic and an assistant decided to do what had not been done, to make a thorough repeated examination of the stomach after a test breakfast.

It was found on the first and each subsequent examination that there was a total absence of hydrochloric acid either free or combined. There was no pepsin, no rennet, or rennet symogen, in other words, he had a typical case of achylia gastrica, in which the power of digestion in the stomach had been completely and permanently lost, and the solution of the case hinged on giving the patient the proper diet and keeping the bowels in the proper condition and improving the motor function of the stomach. All the medicines he had before taken in the vain attempt to stimulate his digestive powers had rarely benefited him, often proving positively injurious. The treatment consisted in the prohibition of meats and coarse vegetables. Starchy foods were allowed to predominate and he was allowed some fat in the form of fresh butter, cream, etc., and a reasonable quantity of vegetable proteids. Special emphasis was placed on the improvement of the motor powers of the stomach

and a systematic course of electricity and lavage was given. As it is a well-known fact that if the motor powers of the stomach remain unimpaired, the bowels will vicariously take up the work of the stomach within certain limitations.

The patient referred to stated that so long as he avoided meats and certain of the prohibited vegetables that he was comparatively happy and practically free from inconvenience, but that if he disregarded his instructions and ate meats and other forbidden foods which are normally digested largely in the stomach, he suffered considerable inconvenience. I know that the above case is an unusual one and such cases are comparatively rare, yet many such cases, no doubt, have gone from bad to worse and have suffered many things at the hands of physicians because a proper diagnosis had not been made. It is worse than useless to treat such a case with the various stock prescriptions for indigestion.

I would not have you think that all cases of stomach trouble present difficulties in diagnosis. I would not have you believe that all cases require aspiration and examination of stomach contents. I do believe that all should be able to make such examinations when necessary, and thus be in a position to intelligently treat his patient and give proper directions as to diet and mode of life.

Case 2. Mr. C., aged 50 years, consulted me last summer, complaining of a sense of fullness in the epigastrium. An intense burning in the stomach nearly all the time; patient seems to have eaten the ordinary foods in reasonable quantities, yet he did not experience hunger. The urine was very scanty and high colored, and patient wore a very anxious expression and was very desirous of obtaining relief, as he said life was almost a burden. He had given up his ordinary pursuits. Constipation pronounced. When seen at 12 m., the patient had taken breakfast at 6 a. m. and had driven twelve miles to my office. He stated that he had taken nothing since breakfast, not even a drink of water. Examination revealed the following inspection: The region of the stomach seemed very full and rather sharply outlined. Percussion revealed the splashing sound, very distinctly two inches below the umbilicus. On aspiration, I obtained a large amount of fluid (possibly one and one-half pints), mixed with food, which, on standing, separated into three layers. In the bottom, fine particles of food, in the middle an amber-colored liquid, and on top a dark-looking, foul-smelling, decomposed, fermented mass of retention products.

Chemical examinations revealed acidity very high, free hydrochloric acid in excess, digestion of starches much retarded. On these findings, a diagnosis of dilatation due

to simple atony of the stomach wall with hypersecretion and hyperchlorhydria was made. The treatment consisted in the proper regulation of the diet, liquid foods in reasonable quantities, as soups, milk, etc. Buttered toast was ordered and white meats in small quantities were allowed at the regular meals, and toast with a glass of milk between meals. The patient was instructed to masticate very thoroughly and take rather small meals, but to take five meals per day as I have indicated. All red meats and coarse vegetables and vegetables containing seeds were prohibited.

The medicinal treatment was:

R F. E. condurango, oz. 1¼.
Tr. belladonna, drachm ii.

M. and Sig.: Thirty drops in water half hour before regular meals with large doses of bismuth sub-nitrate.

R Powd. rhei.
Bicarb. soda.
Magnesia usta, aa. oz. iv.

M. and Sig.: One-half teaspoonful one or two hours after meals. The improvement was continuous and noticeable from the first and the patient remained comfortable as long as he was under my observation.

I feel sure that if the patient should resume his former diet of fried meats and large amounts of pork and coarse vegetables, that there would be a return of the symptoms, and that the patient would be forced to seek relief again. I would state in passing that I do not keep up the diet list indefinitely, but the patient is allowed to resume his ordinary food within certain limits after the improvement is pronounced.

In the above case, had I had the opportunity, I should have used lavage and intragastric electricity.

There are many other conditions of the stomach which may be easily recognized by the data that may be gathered from a careful and painstaking examination.

The scope of this paper does not admit of a detailed discussion of them all, but I shall be repaid if I have brought out anything to stimulate the general practitioner or help him in his work along the line of a more thorough investigation of a class of diseases so often relegated to the charlatan.

It is not my purpose to unduly magnify the importance of diseases of the stomach, much less to claim that they are always amenable to treatment, but to try to clear up some of the misconceptions that have gathered around the subject, and I hope and predict that in the near future that the general profession will be as conversant with the improved methods of examination of diseases of the stomach as they are in the other departments of clinical medicine.

They do not require expensive apparatus, the technique is not intricate or difficult,

the results are usually encouraging, and the field inviting.

RECTAL ALIMENTATION.*

By Galen M. Woodcock, M. D., of Bangor, Me.

In the preparation of this paper I claim no originality, but simply wish to bring before you a mode of treatment which is an interesting as well as a useful adjunct in the treatment of certain diseases.

My faith in its efficiency has been proven in the cases under my observation, both in private and in hospital practice. Many lives have been saved, and in no instance have I found the treatment injurious.

Rectal alimentation, or feeding by rectum, should be employed whenever nutrition in the ordinary way is impossible or not desirable. It is a useful resource in certain states of the digestive organs, where food can not be taken, and where for a time they should be kept at rest, in cases of persistent vomiting, of acute gastritis, of gastric ulcer, of diphtheritic paralysis, of spasmodic or other stricture of the esophagus, in delirium, in the exhaustion of fevers, and in other conditions. Its value, however, in nourishing a patient was believed to be very slight until extensive experimental research with reference to absorption of food from the large intestine had been made. These showed that digestion in the colon can proceed if the ingested food is properly prepared.

This method of alimentation was used in the middle ages and in ancient times. Etius mentions such method in 1542. Hood and Steinhauser were among the earliest investigators in this direction. The former found that a piece of mutton introduced and retained in the rectum showed signs of digestion.

In 1841, Steinhauser experimented on a patient with a fistula of the ascending colon, and found that pieces of albumen introduced into fistula could not be found in the feces. On the other hand, pieces of smoked beef and apples were found either slightly altered or unchanged in the stool.

The history of the evolution of the nutritive enema is, from a physiological standpoint, very interesting. The first to discover that the human colon and rectum absorbed an emulsion of eggs and water only when sodium chlorid was added were Voit and Bauer in 1869. They found that those foods were not absorbed in the absence of salt, and in 1871, Eichhorst confirmed their results. Although injections of bouillon, milk and eggs had been used long before this time, no one had ever attempted to

ascertain to what degree the mucosa of the large intestine would absorb it.

In 1887, Professor Ewald, of Berlin, demonstrated the interesting fact that common white of eggs is absorbed from the large intestine without being peptonized or salted, and is more satisfactory than artificially peptonized foods.

Five years later, Leube proposed a meat-pancreas injection, the plan emanating from the idea to transpose something of the character of pancreatic digestion into the large intestine.

This useful enema digests thoroughly in the large intestine, but its preparation is complicated and it rapidly decomposes.

Leube reported a case which he kept alive six months by this enema exclusively, and in a similar way Riegel nourished a case of esophageal stricture for ten months.

Two years later, Filippi made some interesting experiments on animals by resecting portions of the intestinal canal. After removing seven-eighths of the small intestine in a dog, there was no appreciable decrease in the absorption of foods consisting of albuminates and carbohydrates, while nineteen per cent. of the injected fat returned with the feces. This clearly shows that the colon can vicariously do the work of the small intestine. It further demonstrates that albuminates can be absorbed from the large intestine and enter the lacteals without previous peptonization. These remarkable statements have been confirmed by Aldor, who afterward made some interesting and profitable experiments with milk.

To Austin Flint belongs the honor of first introducing this subject to the medical profession in America, in his able paper read before the New York Academy of Medicine in December, 1877. Peasley, Fordyce Barker, A. H. Smith and G. M. Smith, who took part in the discussion of the paper, had all practiced this method successfully.

In Flint's Practice of Medicine (1868) he reports a case of gastric ulcer at Bellevue Hospital, where he gave enema of the essence of beef and milk every four hours during the day and nothing taken into the stomach but small bits of ice. Strength was sustained by this nourishment until the stomach was able to bear food in small quantities. A few months after leaving the hospital, the patient was reported well.

Dr. D. L. Pierce, of Pennsylvania, in the American Journal of Medical Science, in 1852, reports a case of gastric ulcer, the patient being sustained wholly by enemata for three months.

W. O. Stillman, in his paper on Rectal Alimentation, says: "The clinical fact remains that certain foods, digested or undigested, are taken into the system when thrown into the rectum: that the power of absorption there may be good when the

*Read before Maine Medical Assn.

stomach is weak and rebellious; that it is assimilated, for the body gains in flesh and power, and that there may be merely the customary evacuations as an excretory resultant. As far as I am aware, no danger attends feeding by the rectum when conducted with ordinary care and intelligence on the part of the nurses or attendants.

In preparing the patient for this treatment, a few simple but important things should be observed. Place the patient on his left side, with hips raised upon a pillow, and direct him to use both the will and muscular power to retain the enema, which is best given early in the morning, at least one hour before the first feeding. Some physicians use the cleansing injection before each nutrient injection, but this to my mind is unnecessary. The enema should consist of a quart of water warmed to a temperature of 98 degrees or 99 degrees F., to which is added a teaspoonful of salt. The injection should be made with a funnel or an irrigating bottle attached to a rectal tube, which should be passed high up into the colon, at least twelve inches. The higher up the enema is placed, the less will be the liability of its rejection.

There are many classes of substances used for rectal feeding, but to my mind many of them seem harsh and irritable. Thompson found dried beef blood to be impracticable, and that fresh defibrinated blood possessed no advantage over predigested milk or peptones. The market contains different beef juices and several kinds of peptones and propeptones, which, after dissolving two or three ounces in six to eight ounces of water, are ready for use. In addition, Ewald recommends the egg-enema; Leube, the mixture of scraped meat and fresh pancreas; Roberts, milk gruel and beef tea; and others, as eminent and careful in their investigations, recommend other food enemas, formulas of which may be found under the dietetic table. The length of time during which this feeding should be given must be determined by the individual cases.

From five to ten ounces of the feeding enema may be given and repeated three or four times a day. The addition of opium to the injections may insure retention, but it may also retard absorption.

Busch has shown that digestion may go on in the human intestine without gastric or pancreatic juice, without bile and secretion of Brunner's glands.

The patient on whom Busch experimented had received an abdominal injury by an accident, in such a manner that the gastric juice, together with the chyme, pancreatic juice, duodenal secretions and bile ran outward through a fistula. Thereafter, Busch fed him through the fistulous opening communicating with the lower bowel, and succeeded in maintaining the nitrogenous equilibrium.

He lowered coagulated albumin, inclosed in small cotton bags, into the bowels and drew them out by a string five hours later, finding that from five to thirty-five per cent. of the albumin was dissolved. The method of absorption may be in two ways, by reversal of peristalsis or antiperistalsis, which occurs after frequent irrigation. Hanks, of New York, has had patients kept alive in this way for a period of eight weeks. A prominent gynecologist of New York has declared that he had, during an operation, seen the saline solution pass up as far as the cecum, where a hot saline enema was given to his patient in the Trendelenburg position, or by absorption from the vascular supply of rectum, sigmoid and colon.

This is shown by the nature of their anastomosis, viz.: The superior rectal and sigmoid veins connect with the inferior mesenteric vein, therefore these veins conduct whatever they have absorbed directly to the liver, through branches of the vena porta. In the liver the very important secondary digestion takes place.

My experience with this treatment has been more along the line of chronic and incurable conditions, where it has been used to give comfort by relieving hunger and thirst and insuring absorption enough to prolong life. It is, however, not without its merits in the conduct of many acute conditions, where it may be impossible to properly nourish patients by stomach, as in acute gastritis, dilatation of stomach, gastric ulcer, vomiting of pregnancy, typhoid fever and pneumonia. I have personally carried on this method successfully in all the conditions mentioned, following it up for periods varying from four days to four weeks, thereby giving the stomach a complete rest and nourishing the patient in the interim.

The following case may be of interest: Was called to see Mrs. H., aged twenty-eight, on October 8, 1901; found her suffering from typhoid fever, with extreme nervousness, high temperature and great weakness. She gradually developed an irritable condition of the stomach. Milk in all forms was tried, in turn peptonized, sterilized, with lime water and carbonated water. All were rejected; barley water and rice water were attempted with the same result.

Patient had now become very much emaciated and presented all the symptoms of profound exhaustion. Began rectal feeding October 30th. Used a funnel with common large-size rectal tube and injected six ounces of nutrient enema every four hours during a period of one month. The preparations used varied somewhat, but consisted principally of eggs and milk, to which was frequently added as directed: Spirits frumenti, $\mathfrak{ss}$, also panopeptone in $\mathfrak{ss}$ dose, and liquid peptonoids in same quantity, with aqua $\mathfrak{ss}$, to which a small portion of chloride sodium

had been added. The bowels were thoroughly irrigated with a quart of saline solution every morning, one hour before nutritive enema was begun.

This case, to my mind, was one of the most unpromising I had seen for years, and I feel that my patient owes her life to absorption of nourishing enema, together with what stimulant could be used in that way. She made a tedious but good recovery. I have had similar experiences in other cases of typhoid, and in a few cases of pneumonia, when this form of alimentation seemed to bridge over a very critical time in the conduct of the case and played an important part in saving life.

In closing, I would say that I hope the discussion will bring out the stray points for and against rectal feeding which I have so poorly attempted to bring to your attention.

THE GENERAL PRACTITIONER IN OBSTETRICS.*

By Benjamin Britt Sims, M. D., Talladega, Ala., Junior Counsellor of the Medical Association of the State of Alabama.

The subject to which I invite your attention for discussion is old, older even than medicine itself; it has been hashed and re-hashed, discussed and, re-discussed from every point of the medical compass, and I am free to admit that I have nothing new to which I would call your attention to-day. Then you, no doubt, are asking: Why take our time with such a hackneyed subject? Because I see that we, as older men, have made blunders and errors which our forefathers made that cost many mothers and infants their lives; and because I see that the younger men of to-day are making the same mistakes which we and our predecessors have cause to regret.

And, again, there are other reasons which I will mention later, that make me believe that a discussion of this subject is needful. In Alabama, and in the other Southern States, the general practitioner has charge of the great majority of cases of obstetrics, and I will make the assertion here that we get less pay for it according to time and skill required than in any other branch of medicine.

I wish, first, to call attention to some mistakes I have made in attending breech presentations, and I notice that identically the same errors are being made to-day by some of the younger men.

For example, we are called to a primipara in labor and, after sterilizing our hands,

genital organs of the patient, etc., we make a vaginal examination and can reach no part of the child. We are not very well trained in determining the position by external manipulations, so we fold our hands and wait for results; the pains are very good, but there seems to be no progress.

We get impatient and want to leave for a while to make other calls, but the scared husband and the patient's over-anxious father and mother, who are momentarily expecting to be grandpa and grandma for the first time, will not listen to our leaving for one minute. And so again we fold our arms and begin to wait for results. The pains get harder, the patient's complaints get louder; the husband, who has never witnessed anything of this kind, thinks his wife is having a fearfully hard time. And the aforesaid father and mother, who have forgotten more than they ever knew about having babies, conclude that it is time for the doctor to do something and proceed to inform us that poor "Mary" is having an awful time, and exclaim, "Doctor, can't you do something to help her?" We make another vaginal examination and find a rather indescribable tumor that we judge to be the breech. We inform the father and mother that Mary is in no danger and that it is best not to interfere. Thus far we have done all right and served our patient well, but as the pains increase in severity, and the groans of the patient become more piercing, that husband becomes more restless and frightened, the father and mother continue to be oblivious to the fact that it is necessary to have pain to give birth to a child and we, at their earnest solicitation, lose our heads, forget our teaching, and consent to make that fatal mistake of interfering with a normal breech presentation in a primipara with tense, unrelaxed tissues.

Probably we will now anesthetize the patient and make a futile effort to apply forceps to the breech not yet engaged in the brim. Failing in this, we become desperate, introduce our hand and bring down a foot, make traction, and, after much effort, deliver the body of the child. But we have by traction extended the head, the chin is no longer flexed upon the chest, but is extended, the occiput lying on the spine. Now this being a primipara, the tissues are taut, we have not given them time to dilate and become lax, and, do what we will or may, that child will suffocate before we can deliver the head.

The moral is to fix our charges sufficiently high that we can afford to sit and wait, explain to those anxious relatives why it is best to wait, and we are masters of the situation.

Of course, the foregoing case is understood to be an uncomplicated breech. Certainly

* Read before Medical Association of the State of Alabama.

If there were symptoms of threatened eclampsia, interference for the sake of the mother is entirely proper. But merely to save time and please relatives who do not understand the situation, it is never justifiable to interfere in such cases.

And, further, not only is the child sacrificed, but very often there is a grave laceration of the perineum, thereby increasing the danger of infection and many times requiring a later or secondary operation to restore the function of the destroyed perineum.

Not only in breech presentations do we do damage by getting too impatient and hurrying too much, but also in many vertex presentations. In short, a fat muscular primipara in whom much time and pain is required to bring about the necessary dilatation and relaxation of the superabundant tissue that seems to be there for no other purpose than to get in the way of the fetal head.

I recall a case in which I was the assistant or consultant. It happened many years ago when both the other doctor and myself were very young and inexperienced. The patient was a fat, muscular primipara who had been in labor ten hours when I was called. The contractions were hard and painful, but she was in good condition, no threatening symptoms whatever; the head was presenting, but had not engaged in the brim. The patient's mother was in attendance, also, and persuaded the attending physician to do something. When I arrived, he told me he had applied the forceps several times and had made traction with all his power, but could not move the fetus. Upon examination, I found the presenting part as he had said, but I also found the first stage of labor not complete. The skin and soft parts of the head were contused and lacerated by the faulty application of the forceps. We decided to wait a while until the completion of the first stage; then we tried the forceps again with no beneficial results. We were both somewhat excited and, after a very private consultation, we concluded that as the head was very much mutilated, and the skull probably fractured, a craniotomy would not do the fetus very much harm. So we performed the operation and delivered the woman of the offending fetus. With the knowledge and experience I have gained since this case, I feel certain that if we had not done anything, this child would have been saved.

I know that with the experienced obstetrician the high forceps operation is easy and simple enough, but the general practitioner who can apply the forceps to the fetal head when it is above the superior strait and deliver that fetus without injury to it or to the mother, especially if she is a fat, short, muscular primipara, might be termed an expert high forceps operator. In

fact, I do not believe there is one general practitioner in ten who can successfully perform the operation. Of course, I know that many infants, as well as mothers, have been saved by the timely performance of the high forceps operation.

But, in the absence of any alarming symptoms, and unless we are certain that we can successfully perform this operation, it is best in this kind of case to leave Nature to do the work in her own good way. In fact, it is best, as far as possible, to leave all cases to Nature, and then we would not have so many women with subinvolution and destroyed perineum.

As obstetricians, we are frequently called upon by a certain class of married ladies to relieve them of recent pregnancies. This practice is rapidly growing among the better class of women, and it is astonishing to think that many of them seemingly do not know that it is socially, legally and morally wrong. Neither do they have any conception of the danger to their lives in submitting to such an operation. Many of them think that, as a matter of course, their family physician is in existence for just such emergencies. Only a few months ago, a married lady of the upper class applied to me at my office and was very much surprised, almost indignant, when I refused to do the operation. She finally got the work done and came very near dying from hemorrhage.

And now, in conclusion, I wish to emphasize the importance of our assuming a positive and decided attitude towards every woman, regardless of her social position, who applies to us for relief in such emergencies. First, try to point out to her the moral wrong in such a procedure, and explain to her that, from the physician's viewpoint, from the time of conception, he has to deal with a human life. If to this reasoning and advice she turns a deaf ear—and very often she does—then tell her, frankly and positively, that you can not render the services she desires, and that if she is determined in her course, she must seek aid elsewhere.

Remember, and I wish to especially counsel the younger men, that the loss of a patient, or the possible loss of a handsome fee, should in no wise deter us from doing our plain and full duty.

CEREBRAL HEMORRHAGE.

By John S. Moremen, M. D., Louisville, Ky.

Hemorrhage into the substance of the brain resulting from the bursting of a blood vessel is comparatively rare in young people, but is very frequent in the old and middle aged. In most cases the primary cause

is a weakening of the walls of the vessel. Then, when any extraordinary pressure is brought to bear upon them, they give way. Such a weakening of the vessel walls is one of the ordinary changes of old age; in younger persons it is caused by disease.

Syphilis is probably the commonest cause of degeneration of the vessels, and a large percentage of apoplectic cases can be attributed to this disease. Tuberculosis is also responsible for a large number. There are many instances of fatty, calcareous and atheromatous degenerations in which it is difficult to name a single definite cause; they often seem to proceed from a general state of malnutrition and disturbed metabolism.

The results of the hemorrhage vary greatly and depend largely upon the amount of blood which escapes and the part of the brain affected. To diagnose the locality of the lesion, all the symptoms must be considered very carefully and the anatomy of the brain and the paths of the nerve trunks kept in mind. A positive statement can be made only after mature thought.

The force of the escaping blood may tear some of the delicate brain substance. The principal damage is from the pressure exerted by the clot and also from the compression of the fibrin as it contracts. This pressure is enough, in most instances, to stop all functions of the nerves involved.

In most instances which do not prove rapidly fatal a certain amount of improvement is noticed after a day or two, but complete restoration of function is a slow matter.

When called upon to see a case of cerebral hemorrhage, the physician's first duty is to ascertain from the pulse the state of the blood pressure, and if it is too high, it must be reduced, so that as little blood as possible shall be forced through the rupture in the vessel, and that which escaped may be allowed to clot and close up the opening. Absolute rest and calmate drugs are indicated, for the heart is generally found to be beating violently. If, on the other hand, the heart is dangerously weak, a little strophanthus may be given, for it will steady and strengthen the heart without unduly raising the blood pressure.

For the purpose of absorbing the clot, which is the cause of the continued symptoms, our best drug is the iodide of potassium. There are several vegetable principles, also, which are excellent for this purpose, as *stillingia*, *helonias*, *saxifraga* and *menospermum*.

In the preparation known as *iodia*, all of these drugs are combined and, as in many other instances, it is found that a combination of several somewhat similar drugs is better than any single one of them. To illustrate the efficiency of this preparation,

we shall add the notes of a few cases in which it has been used in our private practice.

Case 1. Mr. John H., age 57; book-keeper; cerebral hemorrhage; had paralysis of the muscles of the right side of the face and of the right arm and leg. He had been a miner in his younger days and lived the hard life of the West. His arteries were badly degenerated and a small one in the internal capsule had ruptured. When first seen, it was three weeks after the stroke and he was sitting up in bed. His power of speech had returned to some extent, but his arm and leg were useless.

Besides giving attention to his general health, massage of the affected muscles was given and, twice a week, they were exercised with electricity. Internally *iodia* was given in order to promote absorption of the blood clot.

The case was necessarily slow, but by degrees the power of motion began to return, first in the muscles of the face. After three weeks of treatment, his face was not noticeably drawn and when he protruded his tongue it deviated very slightly. At the same time, his leg became stronger, so that he was able to bear his weight on it. In five weeks he could walk about the house with the aid of a cane.

The arm was quite slow in regaining its usefulness, but the medicine finally prevailed and he can now, after the lapse of three months, use his hand fairly well, except that his grip is not so firm as it once was. At present he can walk about town without assistance and only on the closest observation can anything wrong be seen in his gait.

He is still taking the *iodia*, and we believe that in a reasonable time he will entirely recover.

Case 2. Mr. Hugh McD., age 34; carpenter; acquired syphilis some six years ago and has taken very little treatment. In November, 1906, he had a sudden stroke of paralysis of the whole left side of the body. He was at work at the time and fell from a low scaffold, suffering a slight scalp wound. The diagnosis was quite difficult at first, but finally it was decided that his paralysis was due to hemorrhage from a cerebral artery which had become weakened by the syphilis; also that the fall was a result of the stroke and not the cause of it. The patient's belief coincides with this.

He was put on a preparation of mercury and on *iodia*, the mercury for the syphilis and the *iodia* for the condition of his arteries and to help in the absorption of the blood clot.

As he is a young and very strong man, his improvement was rapid. In two weeks, he was walking about the hospital and could use nearly all the muscles of his arm. In

two months, he was practically well, though still weak in the affected side. Six weeks later, he returned to work. He continues to take the medicine and will have to do so for a long time to come.

Case 3. Olive B., age 6. Had a bad case of whooping cough and, during a violent spell of coughing, suddenly fell to the floor unconscious. She was put to bed and, when first seen, found the left side of her face and the right side of her body completely paralyzed. It was caused by the bursting of a small blood vessel in the brain.

Her treatment consisted of rest in bed, large doses of calmatives to lessen the cough and the administration of Iodine.

The whooping cough lasted some two weeks longer, by which time motion was beginning to return to a slight extent in the paralyzed muscles. She was given massage daily and the muscles were exercised with the electric battery three times a week.

Six weeks after the stroke, she was playing about the room, although she handled herself a little awkwardly and was inclined to use her left hand in preference to her right. She continued to improve, however, and in three months was using her right hand as she had formerly done and could run about as well as ever.

PERIURETHRAL ABSCESS AND ITS SEQUELAE.*

By Frederick Bowen, M. D., Jacksonville, Fla.

In discussing this subject, the writer is fully aware that the field of genito-urinary surgery has been more than adequately covered along most lines. However, when I first saw a case of periurethral abscess with infiltration, I was not able to find anything in general surgery concerning the condition.

It will be remembered that the mucous membrane of the urethral canal is of a simple columnar type, the corium being covered by small papilla. The true glands are, contrary to the older view, located in the region of the navicular fossa. The many openings which are found at all points of the canal are not glands, but simply blind depressions obliquely set in the mucosa, their mouths always directed towards the external meatus. These lacuna are in two sets, the smaller being well scattered in the diameter of the canal, while the larger are all in the anterior or upper surface of the urethra.

As is well known, some of the chronic inflammations of the urethra are due to the concealment of the specific toxic matter in these blind pockets. Inflammatory processes may be found then in any of the following

periurethral structures: the mucous follicles, the racemose glands, the prostatic glands, the ejaculatory ducts, the seminal vesicles, the uterus masculinus, Cowper's glands and their ducts, and the lacuna.

A chronic urethritis may be the result of the formation of a granulation tissue patch in the surface of the mucous membrane, but by far the most persistent form of chronic urethritis is really a periurethritis, being a periurethral abscess originating in some of the above-mentioned passages.

The different forms of periurethral inflammations may be classified as those of the anterior portion, which, whether they open internally or externally, are apt to do little permanent damage, and those of the deep urethra, which may open into the adjacent structures, or may follow the various fascia and terminate in distant locations. The ordinary symptoms of a folliculitis is usually a slight urethral discharge, which may or may not show gonococci. This condition may become aggravated at any time and develop a hypoplastic condition with suppuration. This may be caused by an acute gonorrhea, or an external injury, but is most often produced by an over energetic or careless instrumentation. Abscesses of this kind usually break into the urethra and may heal without active treatment. If there is fluctuation and the abscess is in the pendulous portion, it should be opened by a free incision externally in order to insure against dissection and infiltration into adjacent tissues. There is very little danger from a fistulous opening if the pus be freely evacuated. Although it seems to be Nature's way to open into the urethra, it will be readily seen that such openings are often above the abscess, and this prevents free drainage. In abscess of the prostate, there often seems to be an inflammatory process which closes the duct where the infection came through, and the abscess will open into the rectum. In the only cases of abscess of the gland that I had seen, all had ruptured into the rectum and simply required curetting through a rectal speculum.

If the urethra near a stricture becomes abraded or punctured, infection may take place from extravasated urine or from the instrument and a small abscess will result. If this opens into the prostatic or the membranous portion of the canal, we may have an extremely serious condition to deal with. Mr. T., a man of 60 years, having a retention of urine, bought and used on himself a semi-flexible catheter, but succeeded in getting no urine, but some blood. He then thought that there must be a suppression, and took some gin and nitre and went to bed. He was found in his room two days afterwards and sent to the hospital. I found the scrotum large and a tumor above the pubes that had every appearance of an over-

*Read before Florida Medical Association.

loaded bladder. We then did an external urethrotomy, and on passing into the bladder were surprised to get only six ounces of urine from the bladder. There was a quantity of pus and urine that had infiltrated the tissues and caused the circumscribed peritonitis, which gave the appearance of a full bladder. Although the tissues continued to drain well, the patient died the next day from septic poisoning. The post-mortem showed an abscess extending anterior to the bladder half way to the umbilicus.

Another patient had had a stricture and occasionally slight retention for years. Not having passed urine for a day, he came to this city and consulted a physician. The urine was drawn and the stricture was cut at the same time. The patient then went to a hotel and suffered chills and great pain, passing small amounts of urine occasionally. On the second day he saw another physician who, after attempting to pass a catheter, sent the man to the hospital. He was in a state of extreme collapse when he entered and, in spite of stimulation, died the same night. The post-mortem showed that the scrotum and pelvic tissues were completely infiltrated with pus and decomposed urine of so foul an odor that it was almost impossible to continue. These cases show the great rapidity with which the inflammatory processes spread in this region.

In two other cases of extravasation, which were seen in less than twenty-four hours after the trouble began, an external urethrotomy was done, the scrotum elevated and, although there was already some infection, both made an uneventful recovery.

The most recent case that I have seen was a man from New England, who had had a sound used the day before starting South. He noticed some blood and a great deal of pain during the trip, but had no retention. He came to me with a temperature of 104 degrees and was complaining of great pain in the whole pelvis. There was a large fluctuating tumor over the pubic region, which did not disappear on catheterization. I passed an aspirating needle into this swelling and got a syringe full of pus, and using the needle as a director made an incision deep into the abdominal wall and evacuated a pint or more of pus. I found that the abscess extended from near the umbilicus down behind the abdominal muscles and in front of the bladder to the urethra, at which point I could feel the catheter I had previously passed. The cavity was very slow to close, but finally became sufficiently healed for the patient to go back north.

From these cases it would seem that abscesses of this character are caused (1) by the escape of a drop or more of toxic urine into a follicle or other opening, or into a wound in the urethral wall; (2) infection,

puncture or rupture of the urethral canal by instruments.

The location of the injury has been in the top or anterior surface of the urethral canal in most cases, and it seems that the short-curved sound is responsible for this and that if the full-curved or prostatic sound were used there would be less trouble. The use of internal antiseptics of the "Urotropin" type should be routine in any instrumentation on the urinary tract.

In those cases of bad stricture which require cutting, it seems best to use an external urethrotomy and let the incised portion rest until healed. All cases of extravasation also must be buttonholed at once instead of the conservative methods. If these procedures were carried out, there would be less pelvic peritonitis from these causes.

SUB-ACUTE GASTRITIS

By H. M. Marsh, M. D., Auburn, Ky.

It must always be a matter of individual opinion as to where we draw the line between an acute and a sub-acute case of gastritis. In this paper we shall speak of those cases which continue for several weeks or months and whose principal symptoms are violent pain and failure of the stomach to digest ordinary food.

The cause of this condition is almost always to be found in some abnormality in the amount or quality of the gastric juice. And, going still farther back, we find that there are several things which may alter the digestive fluids. Mental impressions, as trouble and worry, are frequent causes of indigestion, because, under strong emotion, it is often observed that the gastric and other secretions are hardly put forth at all.

Over-work greatly retards the action of the glands; drinking a quantity of cold water during and just after meals will temporarily stop the processes of digestion. If a man starts at some very hard manual work immediately after a meal, the food may lie in his stomach undigested for hours.

And what is taking place with the food during such times? It is in a warm, damp place and there is no gastric juice to digest it. It soon begins to ferment, to become sour, to "spoil." In other words, the innumerable microbes, which are found everywhere, are living and rapidly multiplying in the food. Under normal conditions, the gastric juice does not allow this growth, for it is quite sufficiently antiseptic.

The products of the growth of these microbes are nearly all poisonous to the human system. The walls and glands of the stomach, which were before merely inactive, now become irritated by these poisons.

and, if the process goes on long enough, it may result in a true inflammation.

When the glands are irritated, they do not produce normal secretions, some elements are lacking and others are in too great abundance. There is produced, moreover, a quantity of thick mucus. This helps to protect the walls of the stomach from the poisons, but it also hinders the outflow of gastric juice, and any food which may be taken is digested with still greater difficulty.

The best treatment under these circumstances is to give the stomach complete rest for a few days, feeding through the rectum, if necessary. Then water may be given, at first in small quantities, and then plentifully. This will wash out the accumulated mucus.

When we begin to give food again, it had better be accompanied by some substance which will stimulate the flow of normal gastric juice. The best drug for this purpose is ginseng, marketed under the name of *seng*. This plan is better than giving pre-digested foods, for it is an immediate return to the natural process of digestion.

As in the case given below, this plan may be used with perfect success even following quite severe attacks of gastritis.

Case 1. John P., age 49; farmer, and used to hard work. Came to me in October last for what had been diagnosed and treated as gall-stone colic. The upper part of the abdomen was very sensitive to the touch, especially over the stomach. There were almost constant eructations of foul-smelling gas; frequent attacks of such violent pain over the stomach that he was compelled to take morphia. Tongue badly coated and a bitter taste in the mouth. Pain was worse after eating, but also came on at other times. Bowels constipated.

After starving him two days and washing out the stomach, I put him on liquid diet and gave him a teaspoonful of *seng* after each meal. He was able to digest it perfectly and his diet was then rapidly increased. At the end of four weeks, he was able to eat almost anything, and in six weeks was discharged a well and happy man.

HOSPITAL FLOORS.

By Charles James Fox, Ph. D., Washington,
D. C.

In the construction of the modern hospital too great importance can not be attached to the subject of floors. In spite of the present day system of thorough ventilation, the isolation of kitchens, laundries, and closets, the immediate removal of all dirt of every character, the frequent use of disinfectants and the sterilizing of all instruments, the hospital can not be sanitary unless it is provided with an aseptic floor. The wooden floor so common in many of our finest hospi-

tals is not only quite out of keeping with the sanitary arrangements of the rest of the building, but is a positive danger from the fact that it becomes a harbor for micro-organisms and infectious growths of all kinds.

Wood is an organic material, and as such, supports vegetable life. The cracks between the boards of a floor, owing to the contraction and expansion of the material after it has been laid down, always opens no matter how carefully it has been joined. The open cracks harbor decomposable street filth and food products of all kinds. The wood itself absorbs much of the dirt and filth that falls upon it, and this matter in decomposing becomes the hot-bed of micro-organisms and moulds of every description. The anaerobic germ, the unseen cause of the insidious "institute smell" soon infects and decays the wood, which thus becomes the most propitious soil for the propagation of disease germs of every kind. As many of these germs live far in between the cracks of the floor and in the wood itself they can not be reached by any ordinary process of cleaning. To many of them the soap and warm water used in scrubbing the floors supplies the very moisture which is necessary to their evil existence. While such a floor is bad enough in the bath-room and kitchen of the modern house, it is almost criminal in a building which is the refuge for persons suffering with every disease known to man, and the home of convalescents many of whom are making desperate struggles to retain their slight hold on life.

In addition to wood we find terrazzo, lead, tile, marble, glass, rubber and many styles of monolithic floors; these last are laid in a plastic state and are made up of sawdust, cork, asbestos and other materials with cement and sand as a base. A perfect floor for a hospital should be non-absorbent, germ proof, easily kept clean and bright, non-stainable by acids, free from liability to crack, fireproof, sound-proof, uniform in color and pleasing to the eye. Although the goal of perfection in this respect may not yet have been reached, we shall discuss the materials just mentioned to find out which one makes the nearest approach to it; admitting at the start that wood is the farthest removed.

Terrazzo is cheap but there is little else in its favor. The smaller pieces of marble soon work loose, leaving countless small recesses which fill with dirt and are impossible to clean. Lead has sanitary properties, but from the artistic and constructive standpoint it is to be avoided.

Marble as a floor material has much in its favor, but also several serious objections. It is easily scratched and worn by the nails of the shoe; it is somewhat porous; and the fact that it is composed of carbonate of lime exposes it to two further criticisms

from the hospital standpoint. If the marble floor is neglected, especially in the angles and corners, it fosters, to a slight degree at all events, the growth of vegetable life. All the organisms of infection have now been classed by biologists as vegetable from the fact that they assimilate their food, particularly the nitrogenous and inorganic portions by absorption from without instead of enveloping it or taking it into a rudimentary stomach. It is a well-known fact that ordinary lichens, if attached to lime stones exude a corrosive juice which dissolves the stone, leaving a tracing of the plant on the surface, and the small amount of lime so dissolved is taken into the body of the plant. In the same manner marble, as a carbonate of lime, yields a similar inorganic base which fosters the growth of vegetable forms, all of which from the lowest forms to the highest plant life require lime as a constituent. This character of marble makes it also easily attacked by the weakest acids; so that it is impossible to use upon it the anti-septic solution, that great aid to true cleanliness, which is so often applied as an adjunct to scrubbing. The mineral acids are the cheapest and readiest antiseptics at hand and the fact that they are barred in the case of marble makes that material unfit for use in hospital floors.

Having in mind the glass table of the operating room many physicians favor glass as a covering for hospital floors. Although glass is harder than marble or slate it is easily scratched by steel, of which shoe nails are almost invariably made, and in scratching it wears rough instead of smooth. Looking through a microscope the rough jagged edge of a scratch in glass is plainly visible, and such tiny recesses soon become a lodging place for dirt, and, consequently, a bed for bacteria. The well-known tendency of glass to chip is likewise a disadvantage.

Rubber makes a good floor covering in some respects, especially if it is laid down in large sheets which prevents the moisture from sinking through to the floor, where the rubber covering prevents it from evaporating, and causes it to decay the wood. But in warm rooms rubber has a disagreeable odor, and it is often very unsanitary from the fact that it merely covers up the dirt which works its way under, if not through it. The rubber tile can not be too severely condemned, because the many joints which unlike those between the clay tiles are not "grouted," that is filled in with hard cement, harbor dirt of all kinds and suck the moisture into the floor below.

All forms of monolithic floors are open to the criticism that as they are composed of several materials they soon disintegrate and present a worm eaten appearance. They also show stains. Portland cement as flooring is extremely rough to the impact of the foot

and wears off the shoe leather very rapidly. It is quite porous and the surface pores become filled with small bits of shoe leather and other dirt and become in consequence a breeding place for bacterial life. The Portland cement floor soon wears rough and looks unsightly. Although a silicate of lime, it is as readily attacked by diluted acids as is marble.

After examining all of the proposed floors it must be admitted that the best so far discovered is the floor of baked clay tile, which consists principally of silicate of alumina, and is an inorganic substance which attains a greater hardness than almost any natural stone. It is so hard that a sharp steel point can not scratch it, but merely makes a mark on it like a lead pencil. As a silicate of alumina it can not be attacked by any acid with the exception of hydrofluoric which there is no occasion to use. As vegetable growths require nothing in the way of clay for their development the clay tile is absolutely sterile as far as they are concerned.

Baked clay tiles, even in the joints between them, are non-absorbent, germ-proof, acid-proof, fire-proof, impossible to stain, easy to keep clean, free from cracking, pleasing to the eye and very durable. While the "perfect hospital floor" may still be a thing of the future, the nearest approach to this goal of perfection has been reached by the clay tile, the sanitary, artistic, and durable qualities of which are as yet unsurpassed by any flooring material.

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THE NEW ALBANY MEDICAL HERALD.

JUNE, 1907.

Old Series Vol. XXV, No. 388. New Series Vol. XIV, No. 189

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EDITORIAL.

THE DRESSING EFFECTS OF HOT WEATHER.

We are now close upon the season of summer holidays and it is well for us as physicians to inquire into the reason of the custom of taking a rest at this time. Why do people choose the summer instead of other seasons for quitting their work? The farmer can not do so; it is the busiest time of the year for him, and there are many others who work the whole year round; but almost every one who can afford to do so takes a vacation during the hottest part of the year.

People do not usually seek a very great change in temperature, a difference of ten or fifteen degrees is sufficient to make a decided improvement in one's feelings. Merely going from the city to the country is often of the greatest benefit for, although the heat during the middle of the day is

just as great in the country, the nights are usually cooler, and one can sleep in comfort. The bracing air of the mountains or the strong, fresh wind from the sea will make the tired city dweller feel like a new man.

Among country folks, the men who work in the fields, out in the hot sun all day, do not suffer so much as the women, who have to stay in the house and cook for the harvest hands. In the city, also, those who work in the house, as bookkeepers and employees in stores, become much more "run down" and anemic than those whose work keeps them outside.

There is a depressing influence in the heat itself which affects all people to a greater or less extent. We see this in the general character of nations, comparing those who live in hot countries with those who live in cold. The peoples of the North are more energetic, vigorous and stronger in every way. One of the greatest differences is in the composition of the blood; that of the Northern races is rich and red, while the Southerner's blood is pale and thin.

This difference in the blood comes from several causes. In the first place, when a man feels strong and vigorous, he works hard, his body uses up more material and he eats much more than one who is always listless. But these conditions of the body react upon one another and are so intimately connected that the state of one organ affects all the others. The whole system has been compared to a chain of lakes; high water in one of them will soon raise the level of them all, and if you drain one the rest go dry also. It is like the old problem as to which came first, the bird or the egg. And, referring to our previous statement that when a man feels strong and energetic, he eats more and makes his blood richer, we may say just as truthfully that when a man's blood is rich and full of nourishment, he feels strong, works harder and eats and digests more food. The causes and effects work in a circle, and no one part of it can be changed without altering the whole.

The primary effect of heat is probably upon the brain and other nerve centers, but so long as a man's body is in good condition, his organs working normally and his blood pure, he can withstand a great amount of hot weather and do his customary work without much inconvenience.

During the summer, a physician is visited by many people who have no particular disease, but are merely pale, anemic, with no appetite, and often afflicted with sleeplessness and headache. They can not afford to leave their home and work, and he must do the best he can for them under the circumstances.

One of the greatest troubles is that of diet; the majority of Americans do not know what

to eat during the summer. We should study the diet of those who live in the tropics and use their bill-of-fare in the hot season. The main article of food in all tropical countries is rice; it is eaten as a vegetable with the gravy from meat, especially stewed meat. A convenient way to cook it is to have a pot with plenty of water boiling violently. The rice, after being washed, is added a little at a time so as not to disturb the movement of the water. In this way the grains remain separate. When done it is drained in a colander and kept hot until ready to serve.

A little curry powder or cayenne pepper will stimulate the appetite and digestion. Very little meat should be eaten; fish, when perfectly fresh, is a good substitute, but the diet should consist mainly of vegetables and fruits.

For the anemia, which is always one of the principal symptoms in these cases, we must give some iron tonic. Other ingredients may be advantageously added to the iron, notably efficient are manganese and a little pepsin. Manganese is a great stimulant to the blood-forming function, and the pepsin is always useful in cases of feeble digestion. A convenient form in which to administer these elements is the well-known preparation, Gude's Pepto-mangan. It is what the druggists call an "elegant" mixture, that is, well proportioned, well combined and agreeable to the palate.

Lastly, in all cases of summer anemias, do not forget to keep the bowels open; the old medical paradox, "Purge and grow fat," is one of the truest of sayings.

RULES AND REGULATIONS FOR PHYSICIANS AND HEALTH AUTHORITIES.

Use antitoxin early!

As in the diagnosis of all cases of suspected communicable diseases, great care should be exercised in the diagnosis of suspected diphtheria. Osler says, "When a bacteriological examination can not be made, the practitioner must regard as suspicious all forms of throat affections in children and carry out measures of isolation and disinfection. In this way alone can serious errors be avoided." This mode of procedure, however, is more applicable to hospital than to private practice.

The Illinois State Board of Health suggests that it is wise for the physician to take into consideration the fact of exposure or non-exposure to the disease, and the prevalence or absence of the disease in the vicinity. If in any case exposure to diphtheria is known to have occurred, even a slightly suspicious sore throat should be regarded as probably a mild diphtheria. If,

on the other hand, no cases of diphtheria have been known to exist in the neighborhood, the ailment should not be termed diphtheria unless clinical characteristics are obvious.

The most certain evidence of diphtheria is the finding of Klebs-Loeffler bacillus in the membrane, but the absence of diphtheria bacilli in the first culture, especially in cases where the disease is confined to the larynx or bronchi, must not be accepted as conclusive evidence of the non-existence of diphtheria, particularly if there be a striking discrepancy between the clinical and the bacteriological diagnosis. The bacilli may be found abundantly in the second culture.

Remember that the Laboratory of the State Board of Health at Springfield is ready, at all times, to afford aid to physicians in establishing diagnoses. Bacteriological examinations are made free of cost.

When the facilities for making a bacteriological examination are not at hand, or it is not practicable to send a specimen of the membrane to the State Board of Health, dependence must be placed upon the clinical symptoms. There are but two conditions with which diphtheria is liable to be confounded, viz., the different forms of diphtheroid faucitis, including follicular tonsillitis and scarlatina. Scarlatina and diphtheria may co-exist, but such cases are exceedingly rare. Scarlatina leads more or less to temporary damage to the mucous membrane of the throat and in this manner predisposes to the reception of the diphtheria poison, causing a series of diphtheria cases to follow after a series of scarlatina cases.

The diagnosis of a typical pharyngeal diphtheria (the usual form prevailing), will not ordinarily be found difficult if careful attention be given to the history of the case, the constitutional disturbances, the appearance and characteristics of the membrane and exudates and the occurrence of albuminuria. To the seat of the membrane, especial attention must always be given, as to the firm incorporation, in diphtheria, of the exudate with the underlying mucous membrane.

Membranous Croup.—Unless it has been determined by bacteriological tests that the disease is non-diphtheritic, all cases of so-called membranous croup should, in the interest of the public health, be considered diphtheria, for sanitary purposes at least, and should be so reported. It is well known that, with a very large proportion of all cases of membranous laryngitis, the Klebs-Loeffler bacillus is associated, whether an exudate is present in the pharynx or not, and it is practically impossible to make a positive diagnosis without a bacteriological test. In view of these facts, the public

safety demands that the same preventive measures be applied to cases of membranous croup as to cases of recognized diphtheria. It must be remembered that in laryngeal diphtheria, i. e., membranous croup, the diphtheria bacillus nearly always produces its influence first on the mucous membrane of the larynx, and in these cases the mucous membrane of the nose and pharynx may never show any evidence of membrane.

Use antitoxin early!

On being satisfied that diphtheria exists in a family, the attending physicians should direct the observance of all precautions necessary to prevent the further spread of the disease, and should at once report the case or cases to the local board of health, if there be one; if not, to the legally constituted health authorities.

The physician should avoid carrying infection. A very leading manner of the conveyance of the bacillus is by the fomites. The contagion adheres tenaciously to a great variety of objects, and has been transferred in clothing over great distances, giving rise to the disease long after. The physician should thoroughly disinfect all instruments used on a patient and should, especially after close contact with the patient, wash his hair and all exposed cutaneous surfaces with a germicidal solution and thoroughly brush his clothing with a whisk broom wet with the solution.

On the recovery of the patient, the attending physician should notify the local health authorities in order that the quarantine restrictions can be removed. The physician should also impress upon the local health authorities the absolute necessity for a thorough disinfection of the infected room or rooms, if he has reason to believe that this important feature of preventive medicine will be overlooked.

Use antitoxin early!

DUTIES OF LOCAL HEALTH AUTHORITIES.

Isolate, quarantine, disinfect!

Whenever a case of diphtheria or membranous croup is reported, the local health officer, if there be one, or a physician appointed by the city, village or town authorities, should visit the premises and secure prompt compliance with the precautions herein enjoined. Every infected house should be properly placarded, and all children therein confined to the immediate premises during the prevalence of the disease, and steps should be taken to prevent all unauthorized persons, especially children, from visiting the premises. Adults from the infected house should be prohibited from mingling unnecessarily with other people, above all with children, and should be required to disinfect their clothing before going out of the house.

Prompt reports of the existence of diphtheria in a family should be furnished to all public libraries and care should be taken that no book from the infected premises be returned to the libraries.

It is not considered necessary to close the schools during the prevalence of diphtheria in a community, unless it prevails in epidemic form, but all schools in the neighborhood should be notified of the existence of the disease, and should any child affected with diphtheria have attended school, the school should be promptly closed until disinfecting.

It is imperative that similar notice be sent also to the superintendents of all Sunday-schools, or to the pastors of the churches, for there is no question but that the liability of the dissemination of contagious diseases is greater in Sunday-schools, which are used but once a week, than in public schools, which are cleaned and ventilated daily. As a further precautionary measure, the local health authorities should see that rooms used for Sunday-school purposes be kept in a sanitary condition and freely ventilated at intervals during the week.

Overdo rather than underdo!

When should the patient be released from quarantine? The time is variable, depending entirely upon the character of the disease, and the presence or absence of complications.

Health officers will ordinarily be justified in raising the quarantine whenever the attending physician certifies that the patient has entirely recovered from diphtheria; that there is no danger of spread of the infection from the patient. As a rule, however, the minimum length of quarantine should be two weeks. In very mild cases, and particularly when antitoxin has been administered, the quarantine may be raised within ten days, provided the physician furnishes the certificate required, and especially if a bacteriological examination of the throat shows no evidence of the presence of the bacilli of diphtheria.

The quarantine should not be raised, however, until the infected room and, if necessary, the entire house, has been properly disinfecting.

On receiving a certificate from the attending physician that the patient has entirely recovered, and that no further quarantine is necessary, the local health officer should see that the infected room and premises, if thought necessary, with contents, be disinfected as directed herein. To be effective, the disinfection must be thorough. "There can be no partial disinfection of infectious material; either its infectious power is destroyed or it is not. In the later case there is a failure to disinfect." Deodorants merely remove offensive odors, and may not have any disinfecting power whatever.

A failure to properly disinfect apartments often leads to the recurrence of the disease.

The bacilli of diphtheria will live on infected substances for weeks. They have been known to live for several months on children's playthings which have been put away.

In the disinfection of school rooms, the burning of sulphur is usually advisable. This fumigation should always be followed by thorough airing for several hours. The floors and all furniture should be washed with a germicidal solution, preferably Standard Disinfectant No. 3.

Disinfect!

Local boards of health and health officers should guard against the introduction or spread of contagious disease by the exercise of proper and vigilant inspection and control of all persons and things coming within their jurisdiction. They should require prompt reports of all infectious and contagious diseases and the isolation of all persons and things infected with or exposed to infectious or contagious diseases, and should placard and disinfect infected premises, close schools and assume charge of funerals, if necessary. They should also cause the arrest and imprisonment of all persons violating their orders. The authorities may, in general, take any measures of precaution, however stringent, which they may deem necessary or prudent in the interest of the health of the inhabitants. "The health of the people is the supreme law."

There is no more liberal law or charter in existence than is given to the councils of cities and the trustees of villages by section 62, chapter 24, of the Revised Statutes, for the almost absolute and unrestrained control of the agencies affecting the public health. Concerning the force and effect of such, the Supreme Court of Illinois, in the case of *Mason et al. v. The City of Shawneetown*, 77 Ill., 533, says: "When an incorporated town or city has been invested with power to pass an ordinance by the Legislature for the government or welfare of the municipality, an ordinance enacted by the legislative branch of the corporation in pursuance of an act creating the corporation, has the force and effect of a law passed by the Legislature, and can not be regarded otherwise than as a law of and within the corporation. An ordinance is the law of the inhabitants of the municipality."

Disinfect!

DISINFECTION.

"Do it now," and "Do it right!"

The thorough disinfection of infected apartments or dwellings is as important as the maintenance of an efficient quarantine during the prevalence of the disease. Hence, no agent should be employed in the effort

to destroy the germs of disease, upon the efficiency of which, under all circumstances, there rests any doubt or uncertainty. The use of a worthless disinfectant or the misuse of a valuable one not only involves a waste of time and material, but jeopardizes the health of the community.

Disinfection of an infected apartment can be successfully performed by thoroughly wetting the floors, ceilings, walls and all exposed surfaces with an efficient germicidal solution. This method, however, is not applicable to the contents of the apartment. For these fire is the most reliable disinfectant, yet as other reliable disinfectants are available, there is little justification for the burning of any article of value, except, for instance, books or mattresses or pillows, which can not be successfully disinfected except by steam.

All infected apartments, with contents, should be disinfected by an efficient aerial germicide, and this fumigation should be followed by a thorough washing of the walls, ceilings, floors and exposed surfaces of the room with a reliable disinfecting solution.

Fumigation by burning sulphur has, for many years, been a favorite method of aerial disinfection. As stated in the recently revised Prize Essay of the American Public Health Association, on "Disinfectant and Individual Prophylaxis Against Infectious Diseases," by Surgeon General George M. Sternberg, U. S. A., "the experience of sanitarians is in favor of its use in yellow fever, smallpox, scarlet fever, diphtheria and other diseases in which there is reason to believe that the infectious material does not contain spores." In the majority of the infectious diseases, the specific germ does not form resistant spores, hence sulphur dioxide would seem to be a reliable aerial disinfectant. It must be remembered, also, that some authorities do not subscribe to the statement that sulphur is powerless to destroy pathogenic organisms containing spores.

Admitting the impotency of the fumes of sulphur dioxide under certain conditions, and the fact that they may not kill the spores of anthrax or other bacilli, "there is no reason," as stated by Dr. Sternberg, "for rejecting an agent which has been demonstrated by experience to be one of great value, which has been proved by laboratory experiments to be fatal to pathogenic organism in the absence of spore and to destroy the infecting power of vaccine virus."

Sulphur will be found a thoroughly reliable gaseous disinfectant of considerable penetrating power, if it is intelligently employed. To obtain satisfactory results, the following essentials of successful disinfection, established by repeated experiments, must be observed: (a) The infected room, or rooms,

must be thoroughly closed, every crack and crevice sealed. (b) Sufficient sulphur must be used. (c) There must be ample moisture in the room. (d) The time of exposure must be sufficient, ten hours the minimum.

In the disinfection of stores, halls, school houses and apartments or dwellings in which there are no articles to be injuriously affected by the gas, sulphur is an ideal disinfectant. Its mode of application is simple (the simpler the mode of application, the better); it is cheap; the material is accessible everywhere, and, finally, the most important of all, the action will be invariably found effective when the sulphur is properly used.

During recent years, formaldehyde gas has, to a very considerable extent, taken the place of sulphur dioxide as a gaseous disinfectant. Various methods for the use of formaldehyde have been devised—all requiring apparatus more or less expensive and complicated—all exploited with extravagant claims of merit and infallibility. None of these, however, has proven worthy of the claims made for it, while many have been entirely worthless. The fact that the vast majority of devices, at one time exploited and enjoying wide popularity, and widely purchased by confiding health officers have been eventually relegated to the junk heap, indicates clearly the failure of former methods of formaldehyde disinfection to meet the requirements upon them.

"Any man may make a mistake, but none but a fool will continue in it!"

Almost continuously, since 1897, the State Board of Health has experimented with and investigated the merits of formaldehyde. Every device and every apparatus coming to the attention of the board has been fairly and thoroughly tested. In view of the results obtained with all, the State Board of Health has been unable to recommend formaldehyde disinfection in the past, and is only able to recommend it now when employed with one form of apparatus.

The method now unreservedly recommended by the board consists merely in pouring formaldehyde solution over crystals of potassium permanganate. This method primarily offers the advantage of absolute simplicity in operation, requiring no special apparatus and no fire. In addition to this, exhaustive experimental work has demonstrated that, in practical disinfection, the method is unusually efficient, regardless of the conditions of humidity, temperatures and other factors which materially affect other methods of the use of formaldehyde.

The only apparatus required is a large open vessel, protected by some non-conductive material to prevent the loss of heat from within. An ordinary milk-pail, set into a pulp or wooden bucket, will answer every purpose, although a special container,

devised for physicians and health officers, will be found of considerable advantage. This container or generator consists of a simply-constructed tin can with broad, flaring top. Its full height is $15\frac{1}{2}$ inches, the height from the bottom to the flaring top being about 8 inches. The lower or round section is 10 inches in diameter, while the flaring top is $17\frac{1}{2}$ inches in diameter at its top. The container is made of a good quality of bright tin, is supplied with a double bottom with $\frac{1}{4}$ inch air space between the two layers, and is entirely covered on sides and bottom with asbestos paper. The asbestos paper and double bottom serve effectively to retain the heat which is generated by the vigorous chemical reaction occurring within and which is essential to the complete production and liberation of the gas. This special container can be made by any tinner of ordinary intelligence and cost but a few dollars.

With the room sealed, as previously described, and as is essential to any form of aerial disinfection, the crystals of potassium permanganate ($6\frac{1}{4}$ ounces to each 1,000 cubic feet of room space, or 10 ounces when the temperature is below 60 degrees F.), are placed in the container. Over this salt is poured, "formalin," or the 40 per cent. aqueous solution of formaldehyde (16 ounces to every 1,000 cubic feet of room space, or 24 ounces when the temperature is below 60 degrees F.). The formaldehyde gas is promptly liberated by the vigorous chemical reaction of the formalin and potassic salt rises from the generator in immense volume in the form of an inverted cone. It is consequently necessary that all preparations be made in advance, and that the operator leave the room at once on the combination of the two chemicals.

The door or window of exit will be promptly closed and sealed, and the room left closed for at least four hours.

As in all methods of disinfection, success largely depends upon the care which is exercised and the attention which is given to every detail. Simple as the method is, neglect of any of the following points may result in complete failure:

The sick room is not the place for experiments!

1. The room should be sealed and prepared as described previously.

2. The potassium permanganate ($6\frac{1}{4}$ ounces to every 1,000 cubic feet of room space, or 10 ounces at temperature below 60 degrees F.) should be placed in the apparatus or generator. The permanganate must be put in before the formaldehyde solution.

3. The 40 per cent. formaldehyde solution (16 ounces to the 1,000 cubic feet of room space, or 24 ounces at temperature be-

low 60 degrees F.), should then be poured over the permanganate.

4. As the gas is given off in immense volume immediately after the mixture of the formaldehyde and permanganate, the operator must leave the room at once. All preparations must have been finished in advance.

5. The door or window of exit must be promptly closed and sealed, so that there will be no escape of gas, and the room should be left closed for four hours.

6. The room should be thoroughly cleaned after disinfection. All out-of-the-way places, window ledges, mouldings, etc., should be washed with Standard Disinfectant No. 3. The floors should receive careful attention and the solution should thoroughly wet the dust and dirt in the cracks.

Whenever practicable, the special generator, previously described, should be used, and health officers and physicians should have several such containers on hand. In the absence of such a container, however, a milk pail may be used. The milk pail should be set, so as to fit snugly, into a wooden or pulp bucket, or it may be wrapped tightly with several layers of asbestos paper. This is done to retain the heat within the generator and is very important to the proper generation of the gas.

Care must be taken not to place too much formaldehyde in a single container. The reaction is violent and there is great effervescence and bubbling. If the room is too large to be disinfected with one generator, use as many more as are required and place in each only a reasonable amount.

The following quantities may be used safely in the containers recommended:

10 or 12 quart milk-pail, formaldehyde, 16 ounces; permanganate, 6½ ounces.

14 quart milk-pail, formaldehyde, 24 ounces; permanganate, 10 ounces.

For the special apparatus, previously described, formaldehyde, 32 ounces; permanganate, 13½ ounces.

here to a career of great activity and one that touched the general life in many ways. The doctor possessed unusual catholicity of feeling, freedom of mind and fearlessness of action. He was a combination of a scientific mind and an artistic temperament. Everything that was human interested him, and everything that was humane. He was as sensitive as a saint on this side of his character, and as shy. No one could respond more quickly to a suggestion that touched our common nature. If he was audacious, satirical and prone to ridicule ignorance or abuse—or what he considered as such—‘still in his right hand he carried gentle peace to silence envious tongues.’ So, after experience with him, the world had to make up its mind to take him as he was; on no other terms could it get along with him—and he met it at so many points! All life interested him. He was alert in more phases of discovery and development than any but geniuses usually are. He was as courageous as he was quick. He had neither fear nor reverence in the usual acceptance of those terms.”

Dr. Fletcher had a large and lucrative practice and his sanitarium, Neuronhorst, was constantly full with patients. While Neuronhorst has been almost exclusively managed, in the past five years, by Dr. M. A. Spink, who has been associated with Dr. Fletcher in his sanitarium work for twenty years, his pleasant association, from day to day for so many years is an irreparable loss to his associates at the sanitarium.

Neuronhorst will be continued as Dr. W. B. Fletcher's Sanitarium, under which name it was incorporated. Dr. Mary A. Spink was elected to the presidency of the association to fill the vacancy made by the death of Dr. Fletcher. Neuronhorst will continue a monument to his memory and to his work in the profession. Dr. Mary A. Spink's long association with Dr. Fletcher in this work is an assurance of the continued success of Neuronhorst. Dr. Spink is one of the best known consulting neurologists in the State of Indiana.

ABSTRACTS AND SELECTIONS.

DEATH OF DR. W. B. FLETCHER.

An esteemed contemporary says:

Dr. W. B. Fletcher, of Indianapolis, has passed away. He was one of those men of whom it might be said “to have known him was to love him.” Dr. Fletcher was one of the few medical men who enjoyed fame during his life. He was a man of striking personality, a deep and original thinker and a brilliant conversationalist.

The Indianapolis News, in an editorial, says:

“The death of Dr. Fletcher puts an end

CHRONIC CATARRHAL GASTRITIS: ITS PATHOLOGY, SYMPTOMATOLOGY AND TREATMENT.

Under the above title, A. Hamilton Deekens, M. D., of Tacoma, Washington, contributes a most able article to the Medical Sentinel.

He discusses thoroughly the pathology of chronic gastric catarrh, and also its symptomatology, which he divides into subjective and objective.

The objective symptoms are an enlarged, flabby and heavily coated tongue, sallow complexion, foul breath, irregular, feeble and rapid pulse, constipation and a high-col-

ored urine, decreased in amount and increased in specific gravity.

Besides these objective symptoms, an analysis of the stomach's contents always shows a decrease of hydrochloric acid, rennet and pepsin.

The subjective symptoms are a variable appetite, bad taste in the mouth, nausea or vomiting, headache and a sense of weight in the epigastrium, which is aggravated by eating.

The author describes the chemical diagnostic methods in use and then takes up the treatment of the affections; he, like all who have investigated the subject, finds that Hydrozone and Glycozone are the ideal remedies for this very common and distressing condition. As he says, the two most important aids in the successful treatment of this disease lie in dietetics and the use of the stomach tube. Where milk is tolerable, at least two and a half or three quarts should be taken daily, and if combined with vichy water will generally be well borne. Peptonized meat, oysters when not fried, most kinds of fish and soft boiled eggs may be allowed. Fried food, salt and smoked meats, potatoes, cabbage, corn and leguminous foods should be avoided.

One of our most valuable remedial agents lies in the proper use of the stomach tube. The objects to be attained by its use are: (1) The removal of offending matter; (2) the cleansing of the membrane and the destruction of any micro-organisms which may be present, and (3) to stimulate the functions of motion and absorption.

For the first object an alkaline solution of sodium bicarbonate, at a temperature of 105 degrees F. is very useful, the stomach being well filled before the fluid is allowed to return.

For cleansing the mucous membrane and destroying micro-organisms, the ideal medicament is Hydrozone in a 5 per cent. solution. Hydrozone is a very strong yet harmless antiseptic, and its action is remarkable in this class of cases.

At least two quarts of the solution should be used at one sitting and repeated every day, or as the case indicates. When the patient objects to the use of the stomach tube, he should swallow about eight ounces of a 3 per cent. solution of Hydrozone half an hour before eating, lie down and remain upon the back a few minutes, and then upon each side for the same length of time.

Hydrozone dissolves the mucus, kills the bacteria and places the stomach in a better condition to digest food. Other remedial measures consist in the administration of diastase, nux vomica, pepsin, gentian, etc., but the good results achieved by the use of Hydrozone and Glycozone in this class of cases is causing them to rapidly replace the older and less scientific methods of treat-

ment by drugs which simply allay symptoms and do not correct the underlying fault.

A NEW METHOD OF STAINING BLOOD-SPREADS WITH EOSINATE OF METHYLENE BLUE.

Assmann (Muench. Med. Wochenschr.)

The dry unfixed spread is laid in a petri dish and covered in the usual manner with Jenner's stain. After three minutes, the dish is filled with 20 cc. distilled water to which five drops of a one-tenth per cent. solution of potassium carbonate has been added and shaken until the stain has been uniformly distributed throughout the fluid. After five minutes the spread is taken out and dried without further washing. This modification is said to give brilliant pictures, the neutrophil granules in particular being beautifully stained.

INDICATIONS FOR SURGICAL INTERVENTION IN INFECTIONS OF THE BILIARY TRACT.

Deaver (Jour. Amer. Med. Assoc.) believes the origin of such diseases to be in some form of bacterial infection and that the calculi are merely an incident of the disease and are not universally present in diseases of the gall-bladder and bile ducts.

Of 216 patients of Deaver's, thirty-four had no gall-stones. Possibly the majority of attacks of biliary colic are not due to the passage of gall-stones, but rather to a spasm of the gall-bladder caused by an acute cholecystitis. Although gall-stones are very prevalent, not every one presents symptoms. Deaver is in favor of operation in every case in which gall-stones are known to be present, provided there are no contraindications which would render an operation injudicious. Those cases of acute cholecystitis which do not subside under judicious medical measures after thirty-six to forty-eight hours, should be operated on. He thinks if there is a history of previous attacks and the history leads one to think stones present an operation is nearly imperative. When the attacks of cholecystitis are repeated, discomfort persisting in the intervals, an operation is demanded in order to obtain a cure. When the attacks give rise to cystic and pyloric adhesions, which impair the motility of the stomach, operation is almost invariably demanded. The mortality is small so long as the lesions are confined to the gall-bladder. In hydrops of the gall-bladder cholecystectomy is required. Cholecystectomy is indicated in empyema of long standing when the walls are irreparably diseased. In cases of acute empyema drainage may suffice, and in case of doubt cholecystostomy is to be preferred.

Gangrene and perforation require excision. Deaver believes that until the physician can combat the underlying condition of infection in cholelithiasis as successfully as the surgeon he had better leave the complications of gall-stone disease to the surgeon. He protests against the indiscriminate resort to cholecystectomy in cases in which the gall-bladder is not irretrievably diseased but in which the surgeon may consider it a useless appendage. The value of the Carlsbad cure is discussed. The relation of typhoid fever to biliary diseases should be carefully inquired into in the future.

GENERAL EMPHYSEMA FROM RUPTURE OF PULMONARY TISSUE.

Hervoit (*Revue Mensuelle des Maladies de l'Enfance*): A child four years of age with a tuberculous history acquired a laryngeal diphtheria, necessitating intubation. A generalized emphysema of the thorax and neck developed, from which the child died. At the autopsy the cellular tissue of the anterior mediastinum was found injected with air and both lungs collapsed. By inflating the lungs, the site of the rupture was found in the left lung.

MEDICAL GLEANINGS.

I think slow solution does not explain cumulation of digitalis with the soluble preparations used here.—Brunton.

Nitrogenous food is needed more by children than by adults, their growth and development being much more rapid.

Women subject to sore nipples should bathe the breasts and nipples daily, in advance of labor, with dilute tincture of arnica.

Whalen says: "Shun the overcrowded, filthy, disease-breeding street car. Get out and walk the last mile, to disinfect your air-passages.

An observed fact is that women, as a rule, never suffer so severely from gonorrhea as men, but the deeper changes brought about by the disease are more serious.

For occipital headache and pain in the back of the neck give the tincture of phosphorus in small doses, or the phosphate of sodium if there is an excess of acid. If there is a deficiency of acid, give phosphoric acid.

Acute cases of cardiac dilation require absolute rest and are benefited by ether, ammonia, camphor, strychnine and atropine. In chronic cases, Bartholow prescribed: *R* Ferri redacti quin. sulph., pulv. digitalis aa gr. i; pulv. scillae gr. ss. One pill three or four times a day.

Syphilis nasal ulcers may occur anywhere in the nares. They are either superficial or deep and serpiginous with an inflammatory zone. Dry, greenish, offensive

crusts appear in abundance. Caries may perforate the septum on the floor of the nose. By way of local treatment, Levy directs to cleanse with a warm solution of potassium permanganate, and apply tincture of iron with a cotton applicator.

The stomach tube should be employed for diagnostic purposes to determine whether the organ has retained food at a time when it should be empty; therapeutically, to evacuate in cases of poisoning, of insufficient motor power, of chronic gastritis, of hypersecretion, and to introduce food and medicaments in appropriate cases. Its use is dangerous in gastric ulcer or advanced neoplasm. It is useless in temporary digestive troubles, in gastric affections of nervous origin, in neurasthenia and in moderate gastrointestinal atony without retention or stagnation of the food.

Sarcoma of the stomach, though an uncommon affection, is less rare than has been supposed. The diagnosis of the round-cell varieties is practically impossible, though its existence under certain conditions might be suspected. Those of the spindle-cell type should be frequently recognized and often suspected. In either case, the early recognition of a purely surgical condition is easy in the majority of instances. Since prompt radical treatment offers not alone the best, but also the only, hope of permanent relief, without a forbidding immediate mortality (which should now not exceed ten per cent.), procrastination here, as in all cases of suspected malignant disease, is in keeping neither with science nor humanity.

Buttermilk as a remedial agent can not be praised too highly. The lactic acid, the sour of the buttermilk, attacks and dissolves every sort of earthy deposits in the blood vessels. It keeps the veins and arteries so supple and free-running that there can be no clogging up, hence no deposit of irritating calcareous matter around the points, nor of poisonous waste in the muscles. It is the stiffening and narrowing of the blood vessels which bring on senile decay. Buttermilk is likely to postpone it ten or twenty years, if freely drunk. A quart a day should be the minimum, the maximum according to taste and opportunity. Inasmuch as gouty difficulties arise from sluggish excretion, buttermilk is a blessing to all gouty subjects. It stimulates liver, skin and kidneys. It also tones the stomach and furnishes it the material from which to make rich, red, healthy blood. If troubled with gout, avoid meat, sweets, pastry, wines, spices, hot rolls, bread of all sorts, and everything belonging to the class of ferments. If any one has a creaky joint or a swollen or aching one, he should drink all the buttermilk he can relish whenever and wherever he can, but it should be fresh and wholesome.

The New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 519.
New Series Vol. XIV, No. 190.

New Albany, Ind., July, 1907.

\$1.00 PER ANNUM
SINGLE COPIES, 20 Cts

ARTICLES.

FIBROID TUMORS IN THE CHILD-BEARING PERIOD.

S. Marx, M. D., New York, N. Y.

With an ever-increasing experience, I can state without the danger of being thought pedantic that with few exceptions fibroid tumors at the child-bearing period should at all time, if possible, be treated before the advent of pregnancy. This association forms a complication which must, in many patients, be looked upon not as a benign but as a malignant state. Their tendency to rapid growth, their likelihood to undergo sloughing and degeneration, and the great probability of such growths, when situated below or at the dilating zone of the uterus, to make an otherwise normal labor one of utter impossibility or fraught with the greatest danger, is but what we may have to expect in dealing with this associate condition. With hardly another complication in the entire domain of obstetrics are we surrounded with such a mist of doubt; nor can we even certify in advance what we may not expect, immediate or remote. No matter how small a tumor may be in the non-pregnant state, no living being can tell what we may expect during labor—an impossible labor; a furious if not lethal hemorrhage; or, overcoming these, that we may not lose our patient from sepsis, due to sloughing of the tumor mass; or if then it may not end with what the pregnancy should not have been anticipated by—a hysterectomy. But few women with fibroids become pregnant, and this is often their good salvation.

To grasp properly the subject before us we must realize that the most important problem, both from a prophylactic and curative standpoint, is the treatment of this condition. To anticipate my remarks as an obstetrician, I should like to place myself on record as to my belief as to the treatment of fibroids in general, as a gynecologist. This I can do in a very few words, for I am absolutely fixed in my idea as to direct operative treatment.

Should there be found a "fibrous uterus" in any woman who presents herself for such symptoms as would warrant a pelvic examination, I would unhesitatingly advise a hysterectomy, except in those few cases where a simple myomectomy could be done, or where there is a vital indication against such a radical measure; but such certain indications are exceedingly rare, for it is a well-known fact that grave cardiac disturbances, urinary albuminurias and glycosurias are often benefited and sometimes cured by such operations. Multiple myomectomies are dangerous and are, to my mind, uncalled for, to replace a hysterectomy. Even though pregnancy exists, conservative operations can be safely done, as note the following history:

P., pregnant three months, when an examination reveals a pelvis blocked with a fibroid, with a second pedunculated fibroid at the fundus. Abdominal section, with the idea in view to do a subtotal hysterectomy. Since the tumor blocking the pelvis could be readily enucleated and the fundal fibroid readily removed, this was done and the uterus saved. Patient went to term and was delivered by me in consultation by forceps with a living child. Recovery normal. The amount of handling done in this case and not followed by an abortion, proves that the patient got well, not because of, but in spite of this heroic conservatism.

My views as to fibroids in other periods of life are simply those as quoted above. Radicalism.

Should, nevertheless, a patient with a uterine fibroid become pregnant, what would be the best line of treatment to be instituted? First, a diagnosis of pregnancy must be certain, for many grave errors have been committed in extirpating safe fibroids with a pregnancy unrecognized, present. I admit such a diagnosis is difficult, but bearing in mind the possibility of its presence a rapidly growing fibroid at this period is suspicious, even ignoring local signs in the presence of general symptoms indicative of pregnancy. Thus a case about to be operated by one of our most distinguished operators for uterine fibroid was seen by me, and a seven-months' pregnancy in a nodulated fibroid uterus was found, and as the

tumor was fundal, consequently safe, a waiting policy was advocated.

This forty-two year-old patient delivered herself of her first child without trouble. On the tenth day, symptoms of a local sepsis arising, I did a subtotal hysterectomy with complete recovery. On the other hand, the following case is interesting from a negative standpoint, and proves a very valuable lesson:

A young woman, married three months, because of severe pain, sees her family physician, who in spite of the woman's protestation, diagnoses a pregnancy of seven months. There was amenorrhea of about one month, and yet at the physician's urging and questioning, the woman began to doubt her own morality. Pains continuing, the patient, in order to end her suffering, submitted to an induction of premature labor. Under chloroform for one and one-half hours an accouchement force was attempted, in the presence of a consultant. Failing to effect a desired result, I see the case and diagnose a huge fibroid. A small fetal, six weeks' old, sac was removed and patient brought to hospital for observation. On leaving the bed a short time later, she dropped dead suddenly, probably from a cardiac thrombosis from fibroid disease.

A similar case was seen a few weeks ago in Connecticut, where a similar condition was found, but unrecognized by the men in charge. In this case on account of pain and temperature, the huge tumor was removed, degenerated and containing a two-months' fetus. In fibroids at the fundus we act with armed-expectancy and since they are usually non-provocative of mischief during labor, interference is seldom called for, though it is in any other case where there is hemorrhage, persistent and continuous during pregnancy.

Here the indication is vital, and when imperative the uterus should be emptied, or if impossible, better removed. Fibroid involving the dilating zone are of the utmost interest and must demand interference. One of our first means should be to attempt to displace these tumors by pushing them up above the presenting part. Thus Mrs. A., pregnant, a low pedunculated fibroid present, which can be readily displaced; she goes to term and when in labor the tumor is displaced, the forceps applied and the fetus delivered. Normal convalescence and at this time, three months after labor, the tumor has disappeared, so complete was the involution.

When the tumors are fixed, such as in the intra-ligamentous variety, a severe complication faces us. If seen early enough, a deliberate hysterectomy at once or at term is our only means of succor. When at term these tumors may be removed by vaginal section; but this is seldom advisable or

feasible. Our results are better certified to, by a deliberate Caesarian section, thus:

An eighth multipara—all normal labors—At the end of a normal utero-gestation she goes into labor and because of the discovery of a blocked pelvis, I see the case with her attendant. The os could not be made out nor a presenting part discovered, so completely was the pelvis occluded by a huge fibroid tumor. Immediate Caesarian section was done and a living child born. Convalescence normal, and two months after the section, the remnant of the tumor is found, the size of a bean. This rapid involution and frequent disappearance of fibroids is no uncommon experience with me.

During labor this complication becomes one of the utmost important. From simple forceps to Caesarian section may be demanded to deliver the patient.

Experience teaches us that trouble is to be expected during the third stage of labor and in the puerperium. In two words it is summed up: Hemorrhage and sloughing. Fibroids during and after labor must be handled gently and with care. The occurrence of an adherent placenta due to a concomitant endometritis that so often is present with fibroids is the first condition to confront us. Forcibly digging away such an afterbirth invites lesions of the tumor capsule proper, and the danger of cutting off its nourishment becomes evident. When great difficulty is encountered in such enucleation, I am inclined to pack the uterus firmly with gauze for twenty-four hours with the placenta "in situ" rather than invite sloughing and sepsis by the forcible means of digging out the placenta. In one case I was compelled to hysterectomize for the sole reason that it was impossible to remove the placenta per vaginam. The treatment of hemorrhage is simple, firmly packing with intra-uterine gauze, always exercising the gentlest care. The use of the curette in a fibroid uterus recently pregnant is fraught with the greatest danger. Its use is absolutely contraindicated for the one evident danger of sloughing of the fibroid and consequent sepsis. Temperature with pulse rise, or pulse rise alone, are, as a rule, due to beginning necrotic change in the tumor.

If we are in doubt, we can await further developments. The low temperature, rapid pulse, with or without fetid lochia, are all too evident what the lesion is. Intra-muscular and submucous tumors are those that give the best prognosis and the readiest means of extirpation. Examination of the interior of the uterus shows the lacerated capsule and the point of cleavage for the simple enucleation of the tumor. In many such cases have I done this as the simplest and readiest means. "Do rather too little than too much" is a maxim worth remembering. For instance, a second physician

being called to a case ten days P. P., to ascertain the cause of temperature, mistook a sloughing fibroid for a retained placenta. He at once attacked it with a curette and placental forceps and continued so long that he practically removed a good part of the pelvic organs, including a major portion of the bladder. When I saw the case the next day and performed a laparotomy, I never saw such an astonishing picture in my experience before. "Let us drop the curtain."

Sub-peritoneal fibroids are far more difficult to attack and, consequently, make the prognosis worse. Total hysterectomy, either from above or below, will be the operation of choice, the individual skill of operator always deciding the avenue of attack. Drainage should always follow the hysterectomy.

To make my position clear as to "Fibroids in the Child-Bearing Period," I submit the following:

1. Prophylaxis.—Every fibroid during this period, with few exceptions, should be attacked by surgical means.

2. During Pregnancy.—Safe fibroids, those beyond the dilating zone of the uterus, should be carefully watched. Every complication during pregnancy depending upon the fibroid should warrant our attacking surgically, the condition, or, at least, provoke us to the emptying of the uterus.

3. During labor (a) Safe tumors need watching and the resultant complications met energetically but gently. (b) Tumors that can not be displaced and blocking the way passage, warrant Caesarian section followed or not by a hysterectomy.

4. Sloughing and necrotic fibroids must not be mistaken for retained secundines. This doubt must be eliminated by exploration with the clean aseptic hand. Retained secundines are always to be removed manually, and under no condition must the curette be employed, because of the great danger of laceration of the capsule with sloughing and sepsis.

5. Sloughing and necrotic fibroids are always to be attacked surgically, either by enucleation or by a hysterectomy.

947 Madison Ave.

THE SIGNIFICANCE OF DYSPEPSIA FIRST APPEARING IN ELDERLY INDIVIDUALS. *

By James S. McLester, A. B., M. D., Birmingham, Ala.

A large number—I had almost said, the largest number—of our errors are those of omission. It is of a very common error of omission that I wish to speak.

Optimism is ordinarily a virtue, but when carried too far it becomes a failing. It is

characteristic of most of us in the consideration of the various possibilities surrounding the complaining individual who consults us that we give first thought to the minor ailments which he may have, and, in a falsely optimistic manner, leave from our considerations all thought of the graver diseases. Reflection will, I am sure, convince any one of the fallacy of this mental attitude; for where there are conditions making possible any of several disorders, certainly we should endeavor first of all to exclude, by all the means in our power, the most serious of these and then take into consideration the least serious.

In passing, I might suggest that were pulmonary tuberculosis the first instead of the last possibility considered in the case of every youthful individual with a cough and a record of lost weight, the mortality from this disease would be lessened. We can best serve the patient in such doubtful cases not by holding tuberculosis a dreadful thought to be put behind us and not to be mentioned, but, on the other hand, by tactfully yet plainly making such provisional diagnosis as will give the patient opportunity to take those steps which would in its incipency lead to the healing of a tubercular process.

Somewhat similar, and this is the error alluded to above, is our mental attitude towards the elderly patient who for the first time suffers from indigestion or who late in life begins to have acute exacerbations of an old but previously mild dyspepsia.

Such a patient may have cirrhosis of the liver—he may have chronic interstitial nephritis—but he also may have, and to this possibility I ask your especial attention, cancer of the stomach.

Exactly why cancer of the stomach is a probability in these cases it is difficult to say; but experience teaches us that such is the case. Ordinary indigestion is almost always due to some faulty habit of diet; the quantity or quality of the food or else the manner of taking it, is wrong. Such habits are acquired in youth or early adult life and the resulting dyspepsia quickly follows. The person who has passed through the toils and stress of early adult life and by hygienic living, has preserved his digestion will not late in life change these good habits. Advancing age carries with it many notable diseases and disorders of function, but disorders of digestion per se are not among them; so that the individual who has reached advanced or middle age without experiencing the discomforts of dyspepsia is not likely to do so unless some remote disease to which his age renders him liable becomes responsible.

These cases of dyspepsia in elderly individuals are naturally first seen by the family physician and upon him lies the burden

*Read before Medical Association of State of Alabama.

of omitting nothing in his consideration of the various possibilities. In hospital and consultation practice we do not usually see them until the condition has lasted some time and considerable progress of the disease has rendered cancer of the stomach a probability even to the casual observer. Then little can be done for the sufferer although much might have been done a few months earlier.

As has been very aptly suggested, we have been educated up to the point of immediately thinking of cancer of the uterus when a woman who has passed the menopause bleeds from that organ, so why not give to the stomach the same consideration when, previously healthy, it begins in old age to show signs of disease.

Examples are common and I mention the following merely by way of illustration: Hosp. No. 7463. M. H., laborer, age 43. Symptoms of dyspepsia, bad taste in mouth, discomfort after eating, anorexia, and belching first appeared seven months before admission to the hospital. He had been during this time treated by his family physician for dyspepsia. Diagnosis of cancer of the stomach was made soon after admission and he was operated upon. On opening the abdomen it was seen that, in addition to the primary growth at the pylorus, metastatic carcinomata were present in the liver and the pancreas. Death occurred a short time later.

Hosp. No. 8078, A. B., boiler fireman, age, 44 years.

Patient was admitted complaining of "much trouble with the stomach." He had suffered with dyspepsia for past ten months for which he had been treated. Physical examination revealed a tumor in the left hypochondrium, and gastric analysis showed it to be a carcinoma. Operation revealed a carcinoma of the pylorus. The patient left the hospital a little more comfortable than on admission and nothing more was heard from him, but I think it safe to assume that the course of the disease was not interrupted at the late stage in which this operation was undertaken.

Another case, in a man of fifty years, which made a profound impression upon me, but of which unfortunately I have no clinical record came under my care as an ordinary case of dyspepsia. He complained of discomfort after eating, anorexia, belching, and occasional vomiting of a year's standing, for which he had been under constant treatment. I remember this man's statement, in answer to my question that no physical examination of him had ever been made nor any attempt at determining the functioning capacity of his stomach. His clothing being removed, a tumor in the left hypochondrium was very evident, and closer examination convinced me that it was of the

pylorus. Gastric analysis confirmed the diagnosis of cancer. The patient would not consider an operation and, feeling it to be hopeless, I could not urge it.

I selected these three cases for reporting because each was hopeless when it came under my care and because much could have been done for each of them had cancer of the stomach been suspected and looked for when the group of symptoms called "dyspepsia" first appeared.

It is not the function of this communication to discuss the means of diagnosing cancer of the stomach, which may with the exception of a few suggestions in the recent literature, be found in any of the text-books upon that subject. While there is no truly pathognomonic sign, there are conditions to be observed from an examination of the stomach contents and otherwise, which, taken together, at least approach certainty in their significance. And where there is a remarkable doubt, I believe, in view of the skill attained to-day by our colleagues in surgery, that an exploratory incision is a perfectly legitimate means of diagnosis.

It seems hardly necessary to dwell upon the advantages of an early diagnosis in cancer of the stomach. Many surgeons like Czerny and Rindfleisch state that when a recognizable tumor has appeared or marked cachexia is present operative measures can not accomplish anything. Yet we are agreed, and I speak as an internist, that in the earlier stages of this disease surgery can do much for the patient by increasing his comfort and prolonging life.

Therefore, you can understand why I make the plea, and make it before this association of practitioners, that every middle aged or elderly individual who for the first time has dyspepsia, be studied most carefully to determine whether cancer of the stomach be present.

* THE GENERAL PRACTITIONER—HIS DUTIES AND QUALIFICATIONS. *

By F. H. Staley, M. D., Clear Lake, S. D.

The practice of medicine and the men engaged therein were not always as we of the present day see and know them. Time was when owing to the laxity of laws, or an entire absence of laws regulating medical practice, almost any man with little or no preparation could hitch "doctor" to the front end or "M. D." to the other end of his name and go to work.

Still we must not form the opinion that the practitioners of former days were so much inferior to those of the present. While the percentage of incompetent, unprepared men was then greater, yet there were many

* Read before S. Dak. State Medical Association.

who by natural aptitude and thorough preparation for their work were the peers of those of to-day whom we might at first glance consider head and shoulders above them.

When we speak of the general practitioner of the old school it brings to our minds the picture as some of us remember having seen him, or as we sometimes have him described in works of fiction. In appearance he was from forty-five to sixty or more years of age; of large build, somewhat inclined to roundness of abdominal region, broad, high forehead, a sharp, shrewd eye, yet with sympathy and kindness beaming from its depths; a pleasant countenance that gave rise to hope and courage when all others may have thought the battle lost.

Such was the typical old general practitioner, the good old family doctor, if you will, whose presence cheered and inspired in the sick room; of whom they said, "He does you good whether you take his medicine or not."

As before said, his education, in many instances, was meager indeed. His very best representative, as judged by present day standards, was not even fairly equipped so far as medical education and training go. I much fear that were he brought up before the examiners in one of our medical colleges or State boards to-day, he would find the distance flag waving in his face. Yet he achieved success. His round of professional duties brought him in contact with diseases which, owing to the thorough control under which they have been brought by advanced methods of sanitation, many of us have never seen, may never see.

As a fruit of his obstetrical work he often met in his visits, mothers, daughter and granddaughter, whom he had been instrumental in bringing to the light.

Of asepsis and antisepsis he knew nothing practically, yet if occasion required he could whip off an arm or a leg with the best of them.

His knowledge of the action of medicines was largely if not wholly empirical, yet we may question if he was not fully as successful in this line as many of his successors.

But of late years, the past twenty to twenty-four in particular, all this has changed. This is an age of concentration and specialization in all lines of human effort. The practice of medicine has been no exception to the general rule. As a consequence, we find hospitals all over the country, where, owing to our enlightened views and the knowledge of asepsis and antisepsis, maladies are now successfully treated and regions are invaded into which in former times not even the most rash would have dared venture. In addition to this, we find an army of specialists, not only in the large centers of population, but in our smaller cities and

towns. As a result of this condition we now find that for almost all the ills of humanity each has its specialist.

Many, both of the profession and laity, are almost led to believe that the oculist cures anything from enuresis to epilepsy by correcting errors of refraction; that the gynecologist can give unfailing relief from another long train of symptoms by curettement or by the repair of lacerated perineæ and cervixes; and so on down through the long list of symptoms, and the almost equally long list of specialties, until the question arises, is there in this day any work for a general practitioner? And many, if of a pessimistic turn of mind, answer that there is not, or soon will not be. That outside of an occasional epidemic of measles, mumps or typhoid, the work of the family doctor to-day has degenerated until he is now a mere steering committee for the various specialists or a drummer for the nearest hospital.

Is this true? Is this an inevitable result of the trend of modern methods towards concentration and specialization? If it is, the career of the man in the general field is almost at an end.

But let us ask ourselves, is not this condition largely due to our own fault? Have we honestly done all that we can do to prevent this narrowing of our field of work? If we have not, what shall we do to be saved? For one, I do not believe the all-around practitioner has outlived his usefulness, but through lack of preparation in some instances, through indifference to encroachments on his domain, or to a lack of confidence in his own ability, when he compares himself with some of the more brilliant lights of the profession, he has carelessly or unconsciously let himself be jostled and elbowed about here a little, there a little, until he is perilously near the edge beyond which is professional oblivion.

The remedy is in our own hands. We can not hope to stop the current of modern times. There are and always will be specialists in medical work, and we need them. But we are on the ground first, and having this advantage, can hold it, provided, always, that we are worthy and well qualified.

The natural qualifications for the successful practice of medicine do not greatly differ now from what they always have been and always will be. A physician who is known to be clean, upright and honest and devoted to his work, will win over one who is the opposite, all things else being equal. In addition to this, he should be a cool-headed, logical, reasoning man, endowed with what is so expressively known as good "horse sense;" not given to hobby riding or fads. Of conservatism he may have too much, but far better so than to be too much given to radicalism. Better to let the men in hos-

pital work and charity practice do the experimenting and investigating than to swallow at one gulp each new fad or fancy that presents itself. In his relation to his patients he should be possessed of genuine sympathy and interest for those under his care, yet he should never allow this to prevent the exhibition of what may well be called gentle firmness when occasion requires.

Assuming that a young man possessed of these qualifications has completed a course in one of our modern, up-to-date medical schools and is about to engage in general work, what can we, from our experience, tell him as to what he will likely meet and how to meet it?

An old professor in one of our well known medical colleges used to say that to be a successful physician consisted merely in being able to intelligently answer two questions. First, what is the matter? Second, what are you going to do about it? The cases which first present themselves to the recent graduate, especially if he locates where the field is already occupied, are almost without exception those of some old, chronic form; those which have been the rounds with little or no benefit. Here is his golden opportunity. He has little to lose and everything to gain.

A case of chronic indigestion may present itself, which has been treated in a hit-or-miss fashion with pepsin, bismuth, acids and bitters, and no accurate or scientific tests have been made to ascertain what form of indigestion is present.

Another may come complaining of headache, some nausea and disturbance of vision. A test of the urine may reveal an nephritis, which his older brethren have overlooked through press of work or indifference. Such instances might be multiplied indefinitely. They are not imaginary. There is not one of us but knows of such cases from his own experience.

Thus we see the first requisite for the general practitioner is to be a good diagnostician. Not only in medical but surgical cases. For to his hands come the victims of the various accidents incident to the daily vocations of men. Not only this, but most cases in which the services of the surgeon are finally indispensable are first seen by the physician. Appendicitis, gall stones, renal calculi, cancer of the various organs, may be cited as a few of many instances of this kind. The physician should be qualified to make an early diagnosis, that his patient may have the necessary surgical relief, thus saving unnecessary suffering and it may be, life.

Further, in all cases in which he can not satisfy himself as to diagnosis, he should be honest enough with himself and his patient to say, "I don't know," and seek advice and

counsel from those whose opportunities have been greater than his own.

Again, he should be, if possible, sure of his ground for another reason. While we do not intend to decry specialties and specialists, yet the specialist is only human, and the tendency of specialism in too many instances is towards narrowness of vision. Many a gynecologist sees the cause of the numerous afflictions of women through his speculum alone. The general practitioner remembers that a woman has lungs, liver, kidneys and some other organs despite her sex.

Then there is the aspiring but inexperienced surgeon, whose zeal for operation and desire for experience are sometimes apt to close his eyes to the fact that medical and not surgical measures are indicated.

Or it may be the unscrupulous one, whose ability to diagnose appendicitis, ovarian or tubal troubles and the like, is only equalled by the avidity with which he pockets the fee for operation.

The general practitioner should and does remember that there is such a thing as old-fashioned bellyache and that it is not always caused by appendicitis, but may be due to green apples, popcorn, peanuts or other irritating substances in the digestive tract, and that the only operation indicated may be secured by the administration of one or two tablespoonfuls of castor oil.

In short, the family physician is sometimes called upon to stand between his patient and misdirected ambition or unscrupulous avarice.

Perhaps one of the strongest factors making for success is the ability to win the confidence, even love, of children. The man who has the mother and children on his side is quite likely to be well regarded by the father. We often hear our lay friends say that it must be difficult to treat children as they are unable to describe their feelings, yet, as a rule, their diseases are not more difficult of diagnosis than are those of adults. They respond readily to treatment and their gratitude is often more lasting than that of their elders.

Another field which our all-around man will find well worth his best attention is obstetrics, especially in practice outside the larger cities. He should be, and generally is, competent to safely conduct all but the very rarest of complicated cases.

Even surgery he must not entirely neglect or pass over to the other branch of the profession. We have already taken up the question of surgical diagnosis, but his preparation should not end here. Cases may arise in country practice where the emergency is so great that it is utterly impossible to get patient and surgeon together. In such an event the physician should be able to operate. His knowledge of the case

should be such that even taking into consideration the fact his lack of experience has not given him the dexterity of the trained surgeon, yet if he has a good, general idea of the principles and practice of surgery as applied to the case in hand, he can, by operation, at least give the sufferer a chance which he would not otherwise have. Strangulated hernia would furnish a striking example of this kind.

Another direction in which it seems the physician could profitably expend his time and talents is in the study of therapeutics and therapeutic measures. Surgery to-day gives such brilliant results that there has sprung up a widespread impression, even among the profession, that drugs and drug-giving are useless in the majority of instances, if not actually harmful. And so long as we "pour drugs of which we know little into bodies of which we know less," as some one has charged us with doing, the impression has a foundation.

But the field for investigation of remedies is open to all of us. It is not necessary that we go out into the realm of the new preparations and combinations with which our literature is flooded, rather let us understand thoroughly how to handle the old standard remedies.

The man who knows what he can do by using iron, opium, mercury and remedies of known efficacy is safer and will accomplish more than the one who is forever chasing after the coal-tar derivatives and the innumerable category ending in "ol" or "in."

To sum up in closing, let us say that the general practitioner is not without his mission. There is a brighter day ahead. His work will not have the brilliancy perhaps that characterizes that of his brother, the surgeon, but having fitted himself and keeping himself fit, he will go quietly and unobtrusively on his way, inspiring hope and confidence in the women who look to him for help in their hours of greatest trial; winning the gratitude of children by his faithful ministrations in their distress; and by being "all things to all men," we believe will, when the time comes to lay aside his work, realize as he may never have done before, that it has not always been thorns that beset the path of the family doctor.

MUSCULAR RHEUMATISM.

By Dr. W. T. Marrs, Peoria Heights, Ill.

This may be classed among the minor ailments, because it is never the immediate cause of death, but it is one of the most painful of afflictions. It attacks the voluntary muscles, and goes by various names, according to the region involved. Its commonest seat is in the muscles of the loins, and it is then called lumbago; when the muscles of the side of the neck are affected

it goes by the name of torticollis. Pleurodynia is the same disease when it involves the intercostals and the neighboring muscles.

These are the usual points of attack, but other groups of muscles may be affected, as those about the shoulders, the upper part of the back, the scalp, and, in rare instances, the diaphragm.

The disease usually follows exposure to cold, especially wind, as when one sits beside an open window; it frequently comes on after a wetting. For this reason those who have out-of-door occupations are the most frequent victims.

The exact nature of the disease is still in dispute; some say that it is an affection of the muscular tissue, and others maintain that it is a neuralgia. People who suffer from gout and other troubles in which uric acid is a factor are very prone to attacks of muscular rheumatism, from which it is argued that this disease, also, is an effect of uric acidemia.

As further corroboration of this idea we find that those remedies which eliminate uric acid are the best ones for muscular rheumatism. Pre-eminent among these drugs are the salicylates, and they should always be given a fair trial. As most of these disturb the stomach greatly, I am glad to call the attention of the profession to one which is well borne. It is a solution of salol in oil of gaultheria. This, of course, can be put up by any druggist, but to be sure of the purity, and also on account of its less cost, I always use the ready-made "gaulsalol" capsules of the Cherry Capsule Co., of Baltimore.

Below are given the notes on a few cases of this disease, which were treated during the past season:

Case I.—Mr. John G., age 58. An old soldier. For many years he had suffered with this affection from time to time. During damp or windy weather he had frequent and severe attacks. The seat of the trouble was usually in the loins, but other muscles were sometimes involved. It often happened that for two or three weeks at a time during the winter he would have to keep his bed.

He had taken many remedies and had been treated in two institutes where hot mineral baths were administered, but the relief he obtained was only temporary; the next time that bad weather came on his disease returned.

During one of these attacks, about six months ago, I was called in consultation with his regular physician. We agreed to try gaulsalol capsules, and gave him one every four hours. The relief was prompt, and on the second day of this treatment he was able to leave his bed and walk about the room. After three more days the pain

and stiffness were entirely gone. He has since taken a capsule or two now and then in wet weather as a precaution against a recurrence of his trouble, but has had not a single bad attack.

Case II.—Mr. Harry P., age 30. Hod carrier. Was called to see him last October, and found him suffering from a severe attack of lumbago. He told me that for the past two years he had had many attacks of the disease, and that during the winter his back was always more or less stiff. His occupation may account in part for his liability to this affection, although he probably has a systemic weakness in that direction.

Prescribed a dose of salts, to be repeated until his bowels had acted freely. A hot poultice was put on his back, and one gaulsalol capsule administered every three hours.

His recovery was prompt; he was at work again on the fifth day. He continued the gaulsalol, taking four capsules a day for a week, and later, only one every night. This latter dosage he kept up for two months, and then, as he had no further trouble, he discontinued all treatment.

Case III.—Mrs. Mary K., age 60. A very corpulent old lady. She, also, was subject to frequent spells of "crick in the back." At these times she would be unable to rise or even turn over in bed; the pain was agonizing. During one of these attacks I happened to be called in, as her family physician was out of town.

Prescribed gaulsalol capsules, one every four hours, and gave a purgative. The attack was much shorter than she was accustomed to suffer. She continued taking the medicine at varying intervals all during the past winter, and by this means was able to live in comfort through a season which is usually one of almost continuous suffering.

ACUTE OTITIS MEDIA.*

By Dr. A. Carr, Minot, N. Dak.

The object of this paper is to present to the family physician a few of the cardinal points of the teachings of Modern Otology; to emphasize the importance of an early diagnosis, and to encourage an interest in what I believe to be one of the most important corners of the wide field of the general practitioner's work.

The great responsibility of the family physician can not be over-estimated. He is the man who has the opportunity to use means of prevention; to make early diagnosis, and to apply prompt treatment before pathological changes have taken place.

Far too little attention is given by the

profession to diseases of the ear in the early stages; hence the opportunity to the aurist is lost to treat the disease at a period when the best results may be obtained. It is well at all times to have unlimited faith in Nature, but in acute diseases in general, and especially in acute inflammation of the middle ear, it is much easier to assist Nature to prevent pathological changes than to restore health and function to tissues after these changes have taken place.

In no disease is delay more dangerous to function and often to life itself than in acute otitis media, and it is the duty of our profession to put forth every effort to educate the public, that the ear when diseases often contains the most virulent forms of infection and that it is surrounded by parts so vital that the extension of infection processes to them from the ear is more dangerous than the extension of infection from the necrotic appendix to the abdominal cavity.

A knowledge of the fact that many of the aural diseases are extremely simple in their incipency and of the further fact that the means of cure at this period are also simple and comparatively easy and the results certain, needs more universal and emphatic proclamation than has hitherto been given.

The absolute dependence of the majority of all aural affections on nasal and pharyngeal disease should be insisted upon and demonstrated.

It is conceded by those in authority that a very large percentage of all diseases of the ear begins in childhood, and that many of them may be prevented and a large percentage cured if early recognition and proper treatment be given by the family physician.

There is probably not another department of practical surgery in which the physician can boast of greater triumphs than those attained in the treatment of acute diseases of the ear.

Acute otitis media, with but few exceptions in its incipency is an inflammatory condition which has traveled from the vault of the pharynx through the eustachian tube to the tympanum. Involvement of the tube as a matter of course precedes the attack upon the middle ear, and as the lining membrane becomes swollen and thickened the tube closes, leaving no outlet for the increased secretion which is poured out into the tympanum by its inflamed membranous lining. The amount and character of the exudate depends upon the virulency of the infection and the resisting powers of the patient. This to some extent explains why in one patient we may have a simple congestion, while in another an acute and rapidly spreading inflammation, the factors of causation being apparently the same in both cases.

As to the etiology, catarrhal affections of

*Read before North Dakota Medical Association.

the nose and throat may be considered as important, but so many conditions enter into the actual primary causes that this part of the subject alone would fill a volume. Among the exciting causes may be mentioned acute infectious diseases, especially la-grippe, measles, scarlet fever, whooping cough and pneumonia.

H. Jareck says: "There is no doubt but that the mucous membrane of the auditory aperture partakes of the general catarrhal condition and eruption of the exanthem."

The micro-organisms to be found are: Streptococcus, staphylococcus, albus, aureus, and vitreous, diplococcus, pneumococcus and pneumobacillus. The streptococci and the pneumococci are the most virulent. Microscopical examination is a valuable aid to the prognosis and also to operative procedures.

The pathological condition to be found in the incipient stage of acute otitis media is a hyperemia of the superficial layer of the lining membrane. As a result of the inflammation, the mucous glands are stimulated and their secretion mixed with the transuded serum, fills the tympanic cavity with a turbid fluid, rather thick in consistence and containing much mucin and holding in suspension desquamated epithelial cells.

The mucous layer of the membrane tympani becomes involved, swelling and exfoliation of its epithelial cells follows, leaving the fibrous layer exposed. This in turn becomes infiltrated and from pressure of the accumulated secretion within gives way at some point, permitting the escape of the fluid into the auditory canal.

In cases where the perforation does not take place after a certain degree of pressure is present, necrosis of the deeper structures occurs and the infection spreads to the mastoid cells where the same process of destruction goes on.

Symptomatology: The symptoms vary considerably according to the age, condition of patient, and the virulency of the disease. In adults the symptoms may be abrupt, though generally slight at first. Merely a feeling of fullness in the ear, a tingling, itching or uneasy sensation. This is usually followed soon by pain of steadily increasing severity, until frequently it becomes excruciating. Impairment of hearing is slight at first, but gradually increases until it is very much muffled or entirely lost. Subjective noises of high pitched character usually manifest themselves quite early. The temperature in adults is not be relied upon as a rule and guide as to the severity of the attack, but on account of the severe pain considerable prostration may follow. At any period varying from twelve to forty-eight hours, perforation of the drumhead may take place and an abrupt cessation of symptoms follow. On the other hand, rupture may be delayed and the disease con-

tinue its course, filling the tympanic cavity with exudate, the vault and the mastoid cavities becoming involved and a purulent inflammation established.

Symptoms in Childhood: In the majority of cases of inflammation of the middle ear in childhood, the pain is severe and the temperature rises abruptly to 102, 104 or even to 106. The attack usually comes on in the night; the child is restless, tosses about in the bed, and after awhile is awakened by the severe pain. In some cases the attack is ushered in with convulsions, vomiting and other symptoms which might be mistaken for those of meningitis. Many of the earaches of childhood, however, are due to a mild form of inflammation and as neither a discharge, deafness, nor apparently any other serious result ensues, the parents and friends are very apt to draw conclusions that all earaches are equally harmless, and that they may be allowed to run for days or even weeks without any effort being made to ascertain the real cause of the pain.

There is a widespread belief in the public mind that an earache is a very trivial affair, something entirely different from a genuine inflammation of the ear. This belief is favored by the well recognized fact that a great many earaches do spontaneously subside without inflicting any harm either to the ear or to the general health. However, in a certain percentage of cases, the earache is the warning note of a serious ailment, that may damage or destroy the hearing, that may cause a lifelong discharge, or that may terminate in a fatal meningitis.

Prognosis: In a majority of cases the prognosis is good. Now and then a case in spite of all treatment will prove rebellious, but as a rule perfect recovery will follow if promptly and properly treated within from two to four weeks.

Diagnosis: As to the diagnosis in adults and with children over three years of age, an error can hardly occur if careful examination be made and the subjective symptoms be taken into consideration. But with children under three years, the diagnosis is, occasionally somewhat difficult. No physical examination of a child should be considered complete without an inspection of the drum membrane. Acute otitis media, as has been stated, is usually but not always accompanied by pain. Occasionally an infant with acute inflammation of the middle ear will manifest no symptom of earache, and others who have pain will exhibit no symptoms which will lead the physician to suspect disease of the ear. Hence, the only means of arriving at a satisfactory diagnosis is by a careful examination of the ear. This I am aware both from experience and observation is not at all times an easy thing to do; however, after the physician has thoroughly mastered the technic of the use

of mirror and speculum he will have but little trouble in adjusting himself to the various circumstances under which he will be called upon to make an examination. For the examination of young children a smaller speculum is necessary than is generally to be found in the armamentarium of the family physician. It will be found necessary also to pull the ear backward and slightly downward instead of backward and upward as in the adult.

Treatment: There are three indications for the treatment of otitis media:

- 1st. Treatment of the ear.
- 2d. Treatment to the nose and throat.
- 3d. Treatment for the general condition.

For the relief of pain during the incipient stage there is nothing that I have ever tried that compares with a solution composed of phenol, 1 alcohol, 4; glycerine, 10.

Menthol and cocaine might be added to this solution, but I have not found it necessary. This as a rule not only relieves the pain, but has a decided effect upon the inflammation.

A small pledget of cotton saturated with the mixture is introduced well down into the auditory canal and left with the saturated end of the cotton against or in close proximity to the drum membrane. This may be repeated, if necessary, every fifteen minutes until the pain is relieved, or until at least half a dozen applications have been made. At the end of from two to four hours, if the symptoms are not considerably relieved, another inspection of the membrane should be made, and if much swelling, redness or bulging is present a paracentesis should be made. After free drainage is established, the auditory canal should be packed loosely with a narrow strip of sterile gauze, and a pad of cotton and gauze applied and retained by bandage. This packing should be repeated as often as required to maintain a free drainage.

After the incision and before packing, the auditory canal, one or two Politzer inflations should be made, having the patient turn the affected ear downward.

The grand rule of modern surgery—drainage and asepsis—should be the guide in the after treatment.

The general treatment should be adapted to the individual case and to the protopathic disease.

SOME OBSERVATIONS ON MALARIA WITH SPECIAL REFERENCE TO THE DISEASE AS COMPLICATING ENTERIC FEVER.*

By A. S. Pendleton, M. D., Henderson, N. C.

The conclusions arrived at and set forth in this paper are the result of a careful revision and study of 943 cases of malaria of

which complete notes were taken and of conversation with medical men living in malaria districts who have had a large experience with the disease.

Of the cases 12 were of the malignant type, with hemorrhages and subsequent jaundice, 97 estivo autumnal remittent, 79 quotidian intermittent and the remainder tertian intermittent. The apparent proportion would be misleading did I not add that, as no record was kept of a great many cases of the tertian variety treated during the same period they are not included.

In the malignant cases the blood was found filled with molecular debris and disintegrating red-blood cells and contained numerous small organisms identical in appearance with those seen in the beginning of the estivo-autumnal type of the disease. The plasma was apparently slightly stained with hemoglobin. From the course taken by these cases, and, according to the experience of men who have treated many similar ones, the danger in malignant malaria is particularly never due to the loss of blood through hemorrhage, but to the toxins in the circulation causing an acute nephritis—death resulting from uremia. The fact that the physicians who obtain the best results in its treatment are those who pay most attention to the kidneys will strengthen the position here taken.

It is very unusual for the hemorrhage to threaten life. Almost invariably the amount of blood lost seems to bear no relation to the gravity of the attack. In one of the cases cited the hemorrhages were very profuse and continued throughout forty-eight hours, yet the patient recovered, though at times no radical pulse could be detected.

In another, the hemorrhages were limited to two and were both slight; yet on the third day there was complete suppression, the patient dying on the eight from uremia, though all known means, including hypodermoclysis, were tried to get the kidneys to act.

The use of the deci-normal salt solution by transfusion, hypodermoclysis, or enteroclysis has undoubtedly materially lowered the mortality, and should be used in every case, regardless of the amount of hemorrhage; its beneficent action being derived much more largely from its direct diuretic effect and from diluting the toxins in the circulation and so preventing nephritis than from replacing blood lost. Nausea with frequent retching and vomiting is almost always present during the first twenty-four hours, and it is a waste of time and energy to give anything by the mouth except calomel, champagne, a little water or cracked ice. A hypodermic of morphine is usually necessary for pain and nausea.

Quinine should be administered hypodermically and, as twenty to thirty grains per *dem* have been proven sufficient to de-

*Read before N. C. Medical Society.

stroy the organisms, the dose should be limited to that amount. The reasons the immense doses of the drug which have been given have done no harm or have apparently done good is because only a very small proportion was given hypodermically and that given per oreum was either vomited or swept through the alimentary tract by the accompanying calomel before there was time for absorption. Diuretics per oreum should be begun as soon as possible.

Nothing of interest was noticed in connection with the tertian and estivo-autumnal types except that the salicylate of quinine was better borne by the stomach than any other salt, that it controlled the headache and backache usually without the need for coal tar products or morphine, and that a smaller dose of it was required, than of the sulphate, to destroy the parasites, fifteen to twenty grains per diem generally being sufficient. As to the etiology of the disease, we are all agreed that it is caused by the presence in the blood of the malarial parasite, variously known as *hemosporidia* of malaria, *plasmodium malaria*, etc., which have been very fully described by many of the authorities, but especially by Thayer, of Baltimore. Manson holds to the belief that the only course of infection is through the bite of the anopheles mosquito and his experiments would lead us to believe that his conclusion is the correct one, but we of the South, and especially those of us who live in the eastern section of North Carolina, have learned through experience that certain conditions certainly predispose to the extent of determining individual attacks whether or not they are responsible for the infection. For instance, those who habitually drink impure water are peculiarly liable to the disease while those who are careful to take nothing but pure water are notoriously free from attacks. The substitution of deep drilled wells for shallow open ones has greatly lessened malaria in certain districts. Those who are exposed to the heat of the noonday sun are more often attacked than those who are not. In intensely malarial districts a paroxysm will often make its appearance after surgical operation or after labor, and one too that is shown to be malarial and not septic in origin by examination of the blood and the administration of quinine. These facts indicate the possibility of other sources of infection. On the other hand the writer has found the organisms in the blood though there were no symptoms indicating their presence and the conditions just enumerated may act by simply lowering the vitality and resistive power of the individual to the extent of causing an attack when otherwise the parasites would have been destroyed without producing symptoms. That exposure to night air predisposes is explained by the fact that the anopheles is essentially a night hawk.

The number of cases is always increased in localities where excavations are being made, where the ditching and draining of swampy lands is being done, but there is less than usual during the summer following such drainage. Malaria is more prevalent in dry than in wet summers; this may be because stagnant water is required for the growth and development of the larvae of the anopheles and oft repeated rains destroy them.

Let us now consider malaria as a complication of typhoid. All authorities I believe admit the possibility of such a mixed infection, but declare it to be a very rare condition.

In the summer and fall of 1899 the writer treated twenty-seven cases which presented the following evidence of being caused by a mixed infection.

1. The plasmodium in one or another of its forms was present in the blood of all, so there was no doubt about the malaria.
2. Widal test position in all.
3. The Diazo-reaction was present in all.
4. Epistaxis in seventeen.
5. Rose rash in twenty-one.
6. Intestinal hemorrhage in five.
7. Perforation of bowel with death followed by post mortem in one.

As you will see, I have taken only those cases in which the proof was practically indisputable and when I add that the total number of typhoid cases, including these, treated during this time was 39, you will perhaps begin to believe with me that in malarial sections the mixed infection is much more common than we have been taught to believe.

In these cases during the first few days of the attack the malarial symptoms were of such prominence as to mask those of the enteric; but after the first week, when sufficient quinine had been given, the clinical course was typically typhoid in character.

The usual history was as follows:

No prodromes, the disease being ushered in with a chill accompanied by headache, backache, and a maximum temperature of from 104 degrees to 105 degrees F., sometimes reaching 106 degrees F. The bowels generally constipated and the tongue pale, flabby and heavily coated.

The urine usually showed a trace of albumin and in some cases particularly those in which the temperature was excessively high, an occasional blood cast was found. Examination of the blood on the afternoon of the second day revealed numerous malarial parasites.

From three to six hours after the chill the fever would begin to subside and the patient to sweat profusely. The temperature would almost or quite reach the normal by the morning of the second day and rise again to about 100½ degrees F., in the evening.

In about fifty per cent. of cases observed there was a second chill with fever and sweat on the third day, regardless of the treatment instituted, but when fifteen to twenty grains of quinine were administered daily the third paroxysm never appeared. Discontinuing the quinine invariably means a recurrence of the chill and usually on the eighth day. Fifteen to twenty grains was found to be sufficient to control the malarial element and seemed to have no deleterious effect on the typhoid.

The course of the disease after the third or fourth day was generally typically typhoid when the quinine was continuously administered.

In five cases there were one or more hemorrhages, and in one perforation followed by death of the patient. Another was complicated by broncho-pneumonia in the third week and the patient succumbed on the twenty-sixth day, making two deaths and twenty-five recoveries. It would seem, therefore, that the mortality is no greater than in uncomplicated typhoid.

The reappearance of the malaria when the quinine was discontinued was probably due to reinfection as these patients were not protected.

The purpose of reading this paper is to get those of you who have had a large experience with malaria to express your opinions without reserve rather than with the idea of presenting anything new.

1. The use of the decinormal salt solution is indicated in every case of malignant malaria, regardless of the amount of hemorrhage for its diuretic action and to dilute the poison in the blood. Not more than 20 to 30 grains of quinine per diem should be given and that hypodermically. No drug save calomel should be administered per orem during the first twenty-four hours.

2. The salicylate of quinine is the salt of election when the drug is to be used by the mouth, it being less irritating to the stomach, causing less tinnitus and a smaller amount being required to destroy the parasites.

3. Have we discovered in the anopheles mosquito the only source of infection?

4. It would seem that in malarial districts enteric fever is more often complicated by malaria than we have been taught to believe, though this mixed infection does not apparently increase the death rate provided the malaria is taken into consideration and treated.

PERSONALITY AS A REMEDIAL MEASURE.

By B. F. Barker, M. D., Bath, Me.

As true as was Sydenham's dictum that more wise men than fools are afflicted with gout, is the solemn present day statement

that wise men, as well as fools, turn aside from the tenets of pure medicine into the fantastically alluring by-paths of such charlatanisms as Christian Science, osteopathy, and other falsely leading roads.

To the mind used to penning its thoughts in readable paragraphs, it is no difficult matter to give forth column after column of invective against these latter day vagaries so inimical to the ultimate well being of mankind; it is easy to become an iconoclast, even if the images be false images. But because they are so false, because they are so teeming with untruth and illogical dogma, they will not remain abased when attacked with such impotent weapons as sarcasm and ridicule, and the vituperative hissings of those capable of forging more vulnerable weapons.

Why is it that sick bodies, often bearing sicker minds, refuse the erstwhile counsel of the men of medicine, and seek renovation of the flesh through consolation of the spirit, by the medium of such basely false cults as infest the land to-day? To us whose every aim is to make of medicine a more and more exact science, to us whose daily purpose is to practice the healing art through truthful precepts, to us who abhor chicanery in any form, this question, so vital to our own interests, so palpably present to those who, we know, have erred in their judgment, must long since have presented itself for some solution.

Quite as many answers as the number of those questioned would doubtless be elicited, and from them all some composite reply might be formulated. These wearied bodies, with their sick souls, have turned from the old belief to these strange gods, because they have, for the while, either lost faith in that which is good, or have become so clamorous for something new under the sun, that their impatience with the old order has rudely cast aside the cumulative knowledge of the ages.

And so another question arises: Have all the numbers who turn to these unscientific catch-alls for aid become impatient without reason; have they become faithless without cause? The practitioner who has lost his grasp on patients who have resorted to these quack offerers of assistance must answer every individual case separately. He knows whether he tendered each sick man all the aid that present day science could afford, and, if such was done, he should watch his former patron turn aside without a quail. But if because of the doctor's poor training, or inattention, or laziness, the sick man has left his doors, can the doctor throw stones at the unscientists? Is he without sin among them? Is he fulfilling his whole duty to his patients and to the State which bestows upon him the right to practice, if he goes about his work in ever so slipshod fashion, never

* Read before the Maine Med. Assn.

probing thoroughly to the bottom of things, but making superficial, inadequate diagnoses that mean little more than the never made diagnoses of the unscientists?

With some little pride in our guild, we can say that such doctors to-day are rare enough to be exceptions to that rank and file who, however ploddingly they may go about their work, still perform it as conscientiously and as thoroughly as their abilities and their opportunities will allow. And in such men as these lies the power to hold patients to them, to give patients faith in them, and, by wise counsel and wiser deeds, make those that come in contact with them ashamed to seek advice of any but medical men.

Now one thing all of us, consciously or unconsciously, learn before having been in practice many years; however broad our learning, however intricate our skill in applying it, it is with the patients that have faith in us that we make our great successes. More cures are wrought by faith than we give faith credit for performing. The most modern methods of diagnosis, the broadest knowledge of therapeutic resources, will scarcely be productive of their full capabilities without that hearty co-operation of the patient which comes in its fullest entirety only when implicit faith in his medical counselor exists.

Perhaps the materialistic doctrine, conjoined to the cold blooded accuracy with which chemical tests and microscopic analyses point their finger to morbid lesions, made us, for a time, forget the minds of our patients in our commendable ardor to improve their bodies. But as the theological pendulum, having swung too far out on the side of materialism, is now retracing its arc, so our patients' minds, having been a little neglected in our worthy desire to grasp all the new data that the past few years have been pouring in upon us, are again coming to attract notice; and their pendulum is swinging so far into the realms of Christian Science and like delusions, that it must, of necessity, soon commence to return over its old course. And so these unchristian, unscientific doctrines will, in the end, fulfill their purpose, by having pointed out to us the tremendous and too little reckoned-with power of faith. Knowing as we do all their falsities and inaccuracies and utter groundlessness for existence, we can ascribe all the cures they have wrought solely to the article of faith they have inspired in their visionary devotees.

And, if faith is so essential an element in the healing process, surely it behooves us physicians to cultivate its growth in our patients. This it is possible for all of us to do, whether we be brilliant city specialists or obscure country practitioner. But to perpetuate this growth of faith means a life consecrated to what Dr. Osler has called

"the masterword in medicine"—work. Un-tiring, unceasing, constant work alone can make of the physician the ideal adviser in whom the sick man has confidence. All the little tricks and artificialities of our medical life will, some time, encounter circumstances where they will no longer make their wonted impressions, circumstances where that personality of the true physician alone can stand as a bulwark against loss of confidence.

And to attain that personality, the physician must be as intimately as possible acquainted with all the things he ought to know. If a specialist, he must be saturated with the diagnostic methods and modes of treatment that his branch embodies. If a general practitioner, he must be sufficiently well acquainted with all departments to determine the limits of his own capabilities, and to decide when a confrere's aid should be sought.

Coming in contact as the physician does, with all sorts and conditions of men, it is not sufficient that he know only medicine. As Professor Parvin used to remark, "the man who knows nothing but medicine, doesn't know medicine." The maximum and minimum of the practitioner's extraneous knowledge is not for any one to determine; for the minimum is ever too small, and the maximum is never too great. Higher and higher standards of admission to our best schools of medicine are to be welcomed by us all, for it means the receiving into our ranks of men who will honor not only themselves, but, by their broad personalities, will bestow upon their co-workers some of their own radiant wisdom.

From no matter how busy the man, is the plea acceptable that he has time for the acquisition of nothing but medical lore. For the more completely his years are occupied, the more does he learn to economize his time so that every moment is made to count, and the loafing periods of his less energetic brother become the interspaces which he so ravenously fills with his outside reading, and first hand acquisition of some things worth knowing beside medicine.

And so, by being as full of erudition and culture in its broadest sense as his capabilities and his advantages will admit, and being as conscientious toward his patients as toward himself, he will, in the long run, attain that personality which will be, to his patients an inspiration to get well. It is only by perfecting ourselves in all the details of our specialty—even if it be the so styled specialty of general practitioner—that we acquire that self confidence that must first be obtained; after which, unconsciously, that personality is erected which is the most abiding inspiration of confidence from others.

And then, this confiding faith of our pa-

tients having been obtained, all the array of importunately intriguing creeds, all the heathenish usurpers of the healing art of medicine, may be laughed in the face. Solely dependent upon the credence of their deluded followers for any relief they can offer them, when a faith built upon something substantial is found to be already at hand, the confidence that the unscientists for a little while could hold, will be gone. For ours is the substance and theirs is the shadow; and when the night comes, when the darkness of distrust and despair that at length overtakes all false creeds as surely as blackness pursues daylight, assails them, the shadow becomes merely a part of that darkness, but the substance remains.

ABSTRACTS AND SELECTIONS.

THE HOUSE OF WARNER.

Our esteemed contemporary, The Medical Progress, calls attention to the fact that when William A. Warner & Co. put out a product, "success is assured." Why for instance, questions the fact that Ingluvin is a specific in gastric and intestinal indigestion? Ingluvin not only relieves the symptoms, but removes the cause by its tonic effect on the stomach and intestines, thus the motor activity and digestive ferments are efficiently increased to carry on a normal digestion of both the nitrogenous and starchy food products.

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Mr. Warner and Mr. Ramsey, who carry the burden of this colossal establishment, love the South. If any of our readers have any doubt of this, let them present their card when visiting Philadelphia and see what happens.

EXTENSIVE RESECTION OF THE WALL OF THE BLADDER FOR CARCINOMA, WITH FAVOR- ABLE RESULTS.

Derjushinsky (St. Petersburg Medicinische Wochenschrift) reports the case of a woman 62 years of age, who complained of pains in the bladder and hematuria. The cystoscope revealed a tumor on the anterior wall of the bladder. On May 24, 1902, Sectio Alta. After opening the bladder, the neck of the bladder and ureteral

openings were found to be free, as the tumor was confined to the anterior and lateral walls of the bladder. Therefore, resection was made, involving two-thirds of the bladder. The bladder sutured, tamponade, of the perivesical connective tissue. Catheter a demeure. After removal of the catheter, there was a fistula over the symphysis. The patient had strangury every twenty minutes. In September, 1902, the fistula was unaltered and incrustations could be demonstrated in the bladder. On the 3rd of October the bladder was opened again, and an incrustated silk thread removed. In the wall of the bladder no recurrence apparent. Fistula closed, but in the middle of November serum began to ooze. Hematuria began, and there were pains over the symphysis and thighs. In December, an exacerbation was proved. Exitus January, 1903. Autopsy: Exacerbation in bladder; multiple metastases in the peritoneum; left sided hydronephrosis by closure of the ureter by the carcinomatous growth.

SERTHERAPY IN PUERPERAL SEPSIS.

A. Eggel (British Gynecological Journal) reports upon the effects of antistreptococcic serum in ten cases of the severest puerperal infection. In two instances, which from the first had all the characteristics of general septicemia without any tendency to localization, and which from the fourth and fifth days respectively were treated with large doses (amounting to 140 and 160 cubic centimeters on the whole), the success was most brilliant, and not inferior in effect to the known action of diphtheretic serum, either in regard to improving the subjective state of the patient or reducing the temperature. The treatment was purposely confined almost exclusively to the serum, and the truth of this statement is evident from the curves of temperature and pulse which Eggel shows. In three other cases also which were instances of the hematogenous form of puerperal infection without definite localization, the serum was found to have a decidedly beneficial effect on the temperature and on the course of the disease generally. Among the remaining cases in which the serum had no effect was one of severe pyemia ending fatally, in which, from want of experience, the doses injected were evidently too small; there were two other fatal cases—one from purulent peritonitis, in which a perimetric abscess was formed, and one which was withdrawn from treatment after the first injection had been given, apparently with good effect, and which ended fatally much later under symptoms of pyemia. No evil effects could be attributed to the injection of the serum, except urticarious eruptions and some days muscular pain, in two patients only.

THE NEW ALBANY MEDICAL HERALD.

JULY, 1907.

Old Series Vol. XXV, No. 339. New Series Vol. XIV, No. 190

GEO. HANLON DAY, M. D., Editor.

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EDITORIAL.

PLEURISY.

Pleurisy is an inflammation of the pleural membrane, and according to modern nomenclature it is now almost always called pleuritis.

The pleural membrane is large, covering the whole of the lung except the root, and also forming the lining of the chest wall and the greater part of the outer layer of the pericardial sac. An inflammation may extend over its whole surface, or it may be confined to a small portion. As in inflammations of other organs the exudation varies greatly in amount and character. In mild cases there may be practically none at all, although there is almost necessarily some thickening of the membrane.

In some cases the exudation is of a thick, mucilaginous character, and it becomes organized, that is, connective tissue cells develop in it, and it becomes, in time, white fibrous tissue. This may merely thicken

the part where the exudation took place, or it may become attached to the opposite wall and form bands from one side to the other. These bands may be merely threads, or when the material is more abundant, strong cords or broad sheets of this tissue are developed. These bind the lung to the chest wall, and greatly limit the movements of respiration. It is they which are the main factor in causing the curvature of the body which is so often seen after a bad case of pleurisy. The lung substance in their neighborhood is not allowed to move freely, so that it can not do its full share of the work of breathing. Moreover, these portions of the lung seem to be more liable than others to invasion by the germs of tuberculosis.

Another form of exudation is the serous. In these cases a fluid which is practically the serum of the blood is poured from the inflamed surface into the pleural cavity. It is a somewhat viscid liquid, heavier than water, and of a light straw color. At times it is tinged with blood, and it may contain clots of fibrin floating in it.

When there is only a small quantity of fluid, it does no harm, and is really of benefit, in that it keeps the inflamed surfaces apart and prevents the pain and irritation of friction. A larger quantity of this serous exudate compresses the lung; there may be so much of it that the lung is squeezed into a small, liver-like mass about its root. The serum then occupies the whole space inside the chest wall, and the spaces between the ribs are bulged outward by its weight.

So long as the exudate remains in this state there is rarely any harm done, for it may all be absorbed again under appropriate treatment, and it would be very unwise to puncture the chest wall and drain it off. The danger of this operation is chiefly that of infection. There is hardly any substance which is such a good food for bacteria as this serum, and in the operation of puncturing the skin some germs are very likely to be introduced. These change the harmless serum into pus.

As a matter of fact the original pleurisy is almost always of microbic origin, and it is from this source that the serum becomes infected. It is more than probable that microbes can work their way out from the lung tissue, the air cells of which always contain numerous bacteria. So it is that we rarely find that an exudation within the pleural cavity remains serous for many days.

When the exudation becomes purulent there is a change in the symptoms. We find headache, dullness, constipation and hectic fever. The general symptoms resemble those of consumption, and a case of pleurisy may be mistaken for that disease, and treated as such, unless a careful examination is made. The patient becomes

weaker and thinner, and will surely die unless the condition is relieved.

The diagnosis of pleurisy is not often very difficult. In the beginning there is an acute pain in the side and sharp fever. When the ear is applied over the inflamed area a rough to-and-fro, rubbing sound is usually heard. Sometimes the sound is like that made by bending a piece of stiff, new leather.

Percussion on the chest reveals nothing abnormal except great tenderness. It must be remembered that the pain experienced in pneumonia is almost wholly caused by the pleurisy which is associated with it, the lung tissue proper are almost insensible to pain.

When a fluid exudate has been thrown out into the pleural cavity the note given on percussion is dull or flat. In cases in which there are no adhesions and the liquid is free to flow in the pleural cavity we can note its upper level by the percussion sound. And when the patient changes his position, as from sitting to lying down, the change in the area of dullness is often easily perceived. In many cases, however, a portion of the lung becomes glued to the lining of the chest wall, and within this area a pocket of exudate is confined. This does not move with a change of the patient's position, and the diagnosis is not so easy.

The only absolutely sure way of ascertaining whether or not a serous exudate has changed to pus is by inserting a hypodermic needle and drawing off some of the fluid.

The principal symptom of the first stage of pleurisy is the pain. It is often very severe, as if a knife were plunged into the side, and every movement of breathing or coughing gives agony. Hot poultices have been much used, but they rarely give complete relief. Strapping the side with adhesive plaster so that the ribs can not move is a much better plan. But some internal anodyne is almost always demanded, and the best for these cases is Papine. This is a preparation of opium which contains only the pain relieving principle, and produces no harmful after-effects. It is given in teaspoonful doses every two hours until the suffering ceases, and then at longer intervals as required.

If the pleurisy is a complication of pneumonia, the principal part of the treatment must be directed of course, to the more dangerous disease. In many cases of uncomplicated pleurisy a free purgation in conjunction with the papine will suffice for a cure. In other cases the salicylates are beneficial.

When the exudate is found to be purulent the only thing to do is to drain the cavity. This may be done with a trocar and cannula, but if it fills up again it is better to resect a rib wash out the cavity thoroughly, and give daily irrigations with some mild anti-

septic fluid. When the pus is no longer formed the opening may be allowed to heal. Breathing exercises and gymnastics are necessary to restore the lung and chest to their normal size and functions.

DISINFECTION VS. VACCINATION.

During the winter of 1900-1901, and the spring of 1901, an unusual epidemic of small-pox prevailed throughout the United States and England. Many large cities were severely attacked. According to reports made to the United States Marine Hospital Service, Washington, 1,295 cases of small-pox with 17 deaths occurred in the city of Cleveland, Ohio, between January 1 and July 6, 1901. The Illinois State Board of Health comments that late in May, 1901, the Commissioner of Health of Buffalo, threatened to institute quarantine against the city of Cleveland unless immediate action were taken to check the epidemic. Measures were at once adopted by the city council, acting in conjunction with the State Board of Health, to prevent a further spread of the disease, and during the month of June the city was practically freed from small-pox. Between July 6 and July 27 but 12 cases were reported and these were properly quarantined.

On July 20, 1901, Dr. Martin Friedrich was appointed health officer of Cleveland. A few days later Dr. Friedrich proposed to the mayor a house-to-house disinfection, in order, to use his own words, "to show to the world what could be done in a case of small-pox epidemic with disinfection with formaldehyde." The mayor giving his consent, Dr. Friedrich announced that vaccination would be abandoned thereafter by his department, and that reliance would be placed on general sanitation and disinfection. This announcement was made when there was practically no small-pox in the city of Cleveland, at a period of the year when, as a rule, outbreaks of small-pox are not looked for, and at a time following a long epidemic of small-pox, during which over 2,000 persons had been attacked by the disease and several thousand vaccinated.

On July 29, 1901, vaccination was entirely abandoned by the health authorities of Cleveland, and disinfection was begun and was continued until November 9th. The health officer was aided in the work by a large number of medical students. Every section of the city in which there had been cases of small-pox was disinfected, and every house in the section whether there had been small-pox in it or not. (All infected houses had already been disinfected by the former health officer.) Every corner of infected house was carefully inspected, and special attention was paid to winter clothing which had been stored away. In addition to disinfection a crusade was begun

against dirt of every description, and the people were enjoined to clean their yards and barns, drain all pools, or fill them in, abate all nuisances, clean all closets and establish sewer connections wherever there was a sewer in the street. The health officers were also instructed to examine all dumps and vacant lots, and to compel the owners to keep them in a sanitary condition. The police and the fire departments aided the health officers in cleaning the wards which most needed it. It was found that small-pox developed most frequently and was hardest to eradicate along those streets that had neither sewer nor pavement. A great many streets were therefore paved and sewered, and this work was pushed at such a rate that it was announced that soon no street in Cleveland would be without a pavement or sewer.

Quarantine was also enforced in as rigid a manner as possible, and every effort possible was made by the department (vaccination excepted) to prevent the further outbreak of the disease.

According to the report of the Commissioner of Health in the Cleveland Medical Journal of February, 1902, the last case of small-pox developed in Cleveland on August 23, 1901, and although eight cases had been imported into the city since that date, the city was then and had been for six months practically free from the disease.

In explanation of the success attendant on his efforts to prevent an outbreak of a disease which had been practically exterminated (for the time being) nearly eight months previous, Dr. Friedrich wrote as follows: "When we consider all the means employed and measures taken during our struggle with the hydra-headed monster, when we sum up and try to reach a conclusion, in my opinion thorough investigation, strict quarantine and sanitary measures come in for a great share in our victory, but the death-blow was dealt by formaldehyde."

No other disinfectant except formaldehyde seemed entitled to any credit.

At the time of the publication of Dr. Friedrich's report, it was evident to all sanitarians and others conversant with the behavior of small-pox, that the disease was merely held temporarily in check, and that if a fresh outbreak occurred in the city, an epidemic would certainly take place among the unvaccinated population which had been neglected during this formaldehyde crusade.

Subsequent events bore out these conclusions. In spite of the house-to-house disinfection; in spite of the improved sanitary conditions effected by the thorough "cleaning up" to which the city had been subjected, an epidemic of small-pox again occurred in Cleveland in 1902. As shown by a report issued by the Illinois State Board of Health in August, 1902, the city of Cleveland dur-

ing the past two months (June 1 to July 25) had far more cases of small-pox than any other two cities in the United States, including St. Louis, New York, Jersey City, and Philadelphia, in all of which the disease has been unusually prevalent during the past year.

The official statement of mortality of the city of Cleveland made by the health officer, Dr. Martin Friedrich, showed the death rate from small-pox for the past three months to be as follows: May, 12 deaths; June, 28 deaths; July, 19 deaths, a total of 59 deaths from small-pox in three months, a greater number of deaths from small-pox than had occurred in the city of Chicago during the previous five years. Chicago, thanks to its energetic department of health, is one of the best vaccinated cities in the United States.

In September, 1902, the health officer of the city of Cleveland, Dr. Martin Friedrich resumed vaccination. No longer did he consider vaccination a drawback rather than an advantage in the fight with small-pox. No longer was he of the opinion that "the only means to strike it (small-pox) a death-blow is disinfection with formaldehyde." According to his report made to the State Board of Health of Ohio early in September, 1902, vaccination was then encouraged throughout the city and was enforced wherever there had been an exposure to small-pox, and "when the disease appears in one of the larger blocks, the whole block is vaccinated." Nearly a hundred physicians recently appointed vaccinators were detailed to make a "house-to-house canvass and vaccinate every one found willing. All teachers and children in the public schools were required to show evidence of successful vaccination before they could attend school. Reliance was once again placed on quarantine, vaccination and disinfection.

During the year 1902, there were 1,298 cases of small-pox in Cleveland, with 224 deaths from the disease. In 1903, there were 106 cases; in 1904, 42 cases, in 1905, no cases.

These figures were furnished by Dr. M. Rosenwasser, president of the Cleveland Board of Health, to the Cleveland Medical Journal of November.

As stated by Dr. Rosenwasser, "the statistics serve not only to undo the mischief done by Dr. Friedrich's paper of 1902, but also clinch beyond all possible dispute, the efficacy of vaccination as the sanitary prevention of small-pox."

Dr. Rosenwasser's further remarks in reference to the epidemics of 1901 and 1902, and the subsequent rapid decline of the number of cases, are of interest. He writes:

"The health officer took charge at the tail end of this (the 1901) epidemic and complacently published the proclamation, 'the

death blow to this epidemic was dealt by formaldehyde.'

"Following this supposed new discovery came the virulent epidemic of 1902, with its appalling fatality. Through the prompt and vigorous initiative of the physicians and the intelligent energy of their lay coadjutors, 195,000 individuals were vaccinated during that year. The epidemic, which had been recurring since 1898, and reached its climax after and despite the campaign of disinfection in 1901, was brought to a halt so suddenly after the wholesale vaccination in 1902, that for the past two years it has become extinct."

In commenting on the matter, the editor of the Cleveland Medical Journal says: "Among all the statistics of small-pox in its relationship to vaccination, that we know of, none demonstrates more clearly the true efficacy of Jenner's discovery, than do the figures of Cleveland."

As factors in the prevention of small-pox, disinfection and general cleanliness play an important part. By means of cleanliness and hygienic measures the danger from the presence of the virus of small-pox in a household can be reduced to the minimum; by means of disinfection the virus can be killed whenever it can be reached. It frequently can not be reached, however, and hence reliance upon cleanliness and disinfection alone is useless.

SWELLING OF THE FEET AND ANKLES.

This is a symptom which is common to several diseases, and the local and general conditions have to be examined carefully before a certain diagnosis can be made as to its cause. The disease which usually gives rise to it is valvular trouble of the heart. Any other disease, however, which impedes the circulation may produce the same symptom. This is seen in cases of anemia, when the heart muscle becomes weakened, and the force of its beat greatly lessened. Many tedious, wasting diseases are accompanied by dropsy, especially when the patient sits in a chair for many hours a day, and lets his feet hang down.

As a common sequel to typhoid and other fevers, and often after puerperal fever, a thrombus is formed in the veins of one of the thighs. This hinders the return of the blood from the limb, it swells greatly, and takes on an acute dropsical condition. The diagnosis here, however, is usually very easy, as it is rare to have both legs involved at the same time, and there is often a sore and reddened spot in the skin over the point where the thrombus is located.

In connection with diseases of the kidneys we very often observe a dropsy of the feet and ankles. In these cases the arteries all over the body are generally hardened and

thickened, a condition known as arteriosclerosis. And in these cases of renal origin there is usually also one other point where dropsy is found, namely, in the lower eyelids. This is so frequently associated with kidney disease that it is regarded as almost an infallible diagnostic sign.

Another condition which brings on a swelling of the feet is paralysis of the legs. In almost every case the swelling occurs when the feet are allowed to hang down for any considerable time. This takes place even when the blood pressure is apparently good, as judged by the force and volume of the pulse. The probable cause of this swelling is the lack of tone in the tissues surrounding the veins. The muscles of a paralyzed limb, being flabby, allow the veins to expand, and the blood current becomes sluggish. One of the principal factors in causing the flow of the blood through the veins is the contraction of the muscles. These press upon the veins and empty them, the valves prevent a return of the blood, and the veins are refilled by fresh blood from the capillaries.

There is another point in the pathology of dropsy of which we sometimes lose sight. There is always going on normally a slight exudation from the capillaries. The blood serum which escapes thus goes to nourish the surrounding tissues, and it is a necessary process. This serum is taken up and returned to the general circulation by the great lymphatic system, which extends to all parts of the body.

When the exudation from the capillaries is excessive the lymphatic vessels are unable to handle it all, and it is allowed to accumulate in the tissues. As long as it remains fluid the condition is not so bad, for with elevation of the limb the blood supply to the part will be lessened. This position also favors the return of the blood, both through the veins and the lymphatics. A little gentle massage is also of great assistance; the limb should be stroked gently upward, toward the body. When there is no great tenderness of the part it is well to squeeze the limb gently, beginning at the toes and going progressively upward.

But when the exuded serum clots, as it does under some conditions we have a "doughy" swelling of the parts. The lymphatic vessels are then more or less clogged with this coagulated mass, and the current through them is greatly obstructed. In these cases careful massage of the limb is of the greatest benefit, and should never be neglected.

In order to prevent or lessen the swelling of the feet and ankles the usual expedient is to apply a flannel bandage. This is elastic, and the pressure is evenly distributed. It is an excellent measure, but as the pa-

tient rarely learns to apply a bandage properly he is obliged to go to the physician's office very frequently. The bandage should begin at the toes, for we do not wish to imprison any blood or serum below the lower end of it.

Of late years we are able to obtain stockings of excellent rubber cloth, which exert an even pressure; these are almost indispensable to those who can walk about. The physician should see to it that they begin far down on the foot, at the base of the toes, and extend up to the top of the swelling.

As a substitute for the stockings some apply Unna's glyco-gelatin. This is a preparation of gelatin, glycerine, zinc oxide and water, made up in different proportions and applied hot. When it cools it shrinks slightly, and is a good support to the parts. It can be washed in warm water.

The foregoing local measures are useful, and should always be employed when occasion demands them, but the principal part of the treatment must be directed to the cause which produces the condition. When the kidneys are disordered they fail to eliminate some of the poisons from the system, and these remain in the blood. Circulating through the body these poisons affect the organism in several ways. Sometimes they irritate the lining walls of the blood vessels, causing a contraction of the muscular fibers of the smaller arteries. This raises the general blood pressure and throws more work on the heart. It may be that this contraction of the vessels may come through an irritation of some nerve center.

At any rate, the heart is overworked, and if the general nutrition is not good it may cause a dilatation and serious weakening of this organ. To obviate this we must give an efficient stimulant and tonic for the heart, and some drug which will increase the action of the kidneys.

As the profession are so familiar with all the ordinary drugs used for these purposes we shall merely call attention here to a combination of some of these with a few other drugs not so generally known. The preparation is called anasarcin, because it was devised to meet this very condition which gives the symptom anasarca. It has been in use now for several years, and its worth has been so thoroughly proven that it needs no further recommendation. Besides its use in cases of dropsy the preparation is specific for all diseases in which there is a lack of balance between the venous and arterial systems.

"INTERNAL VACCINATION" AGAINST SMALL-POX.

The Illinois State Board of Health has received advices from a few cities in the State that so called "internal vaccination"

strongly advocated by certain physicians, was not only being practiced, but was held out to the people as the better method of vaccination.

It is hardly necessary for the State Board of Health to discuss, with the physicians this alleged method of vaccination against smallpox.

Gould defines a vaccination as an "inoculation of the body with the virus of the cowpox, in order to protect from or modify the virulence of small-pox." Bovine vaccination, that commonly practiced, is by the aid of vaccine lymph cultivated in bovine animals. Vaccinia results in any human subject properly vaccinated with cow-pox, unless the person is immune against the effect of the vaccine lymph.

If the vaccination "takes," a small papule appears at the site of inoculation in from one to three days, which becomes a vesicle about the fifth day, and at the end of the first week is pustular, umbilicated, and surrounded by a red areola. Desiccation begins in the second week and a scab forms, which soon falls off, leaving a pitted scar.

The typical evolution of the vaccinal abrasion through its various stages is our best proof that we are securing successful vaccination, while the typical scar is the only satisfactory evidence that vaccination has occurred and immunity has been acquired.

Even though it were possible to secure immunity against small-pox by internal medication—and there is not the slightest proof of this—it would be impossible for the physician to attest that the "vaccination" had "taken," or that the patient was protected against small-pox. The external and internal manifestations of the vaccinia, the phenomena which occur during the first stage of vaccination, and the significant scar resulting, are entirely wanting in "internal vaccination." The physician has no evidence that the "vaccination" has "taken," or that the patient is protected. In many, if not in all, cases he does not even know that the patient has taken the remedy as directed. So far as our knowledge goes, there is not a single experience that can be cited directly and unequivocally against this assumption.

It might be said here that those who practice the Jenner and rational method of vaccination against small-pox, do not hold that a lasting immunity against small-pox is acquired by even a proper vaccination. The idea that a typical vaccination exhausts all future susceptibility to small-pox, finds no acceptance at the present time, although it was a fixed article of faith in the early days of the practice. There is no reason to doubt that the most perfect vaccination loses its effect in the course of years. There is equal reason to believe, however, that the value of the protection afforded is in di-

rect proportion to the thoroughness of the vaccination, and to the quality of the lymph employed.

A word on the character of the lymph will not be out of place here. The "internal vaccinationist" confidently administers his doses of attenuated "variolum," and gravely assures his patient that he is protected against small-pox; the conscientious physician takes care that the lymph he uses is not only pure, but fresh. He knows that a lymph which is attenuated or which has lost its vitality with age—and vaccine will keep but a few months—will afford no protection to his patient.

While "variolum" is administered almost exclusively by physicians of the Homeopathic School of Medicine, it does not seem fair to attribute internal vaccination to the homeopathic school. The writer, who at one time was a public vaccinator, has come in contact with many physicians of the homeopathic school, during vaccination periods. He has yet to meet one who practiced "internal vaccination."

This practice was condemned in 1902 by the members of the Illinois State Board of Health representing the Homeopathic School of Medicine, who was also member of the faculty of the Hahnemann Medical College of Chicago. Furthermore, the homeopathic members of the State Board of Health during the past thirty years, have been in favor of vaccination as ordinarily practiced.

The late Dr. Edward M. Hale, Emeritus Professor of the Theory and Practice of Medicine in the Chicago College of Homeopathy, who was one of the leading physicians of the Homeopathic School said in his latest edition of his work on practice, "If vaccination were universally performed with pure vaccine matter, and repeated as often as every five years, small-pox would disappear forever." The Medical Century, a vigorous and uncompromising exponent of the principles of homeopathy as taught by Hahnemann, speaks as follows in an editorial on vaccination:

"If vaccination protects, and we are inclined to believe that it does protect in a truly homeopathic manner, it should have the chance to be practiced, and nothing but the purest product should be used and the operation performed as successfully as a laparotomy or a trephining operation."

When the editor of the Medical Century and the leading men of the Homeopathic School of Medicine raise their voices in favor of inoculation of the body with vaccine lymph, as a protection against small-pox, in the manner first demonstrated by Jenner on May 14, 1796, it is folly to term the internal administration of "variolum" a "homeopathic method of vaccination."

Abstracts and Selections—Continued.

CAN THE BOSSI METHOD BE RECOMMENDED TO THE GENERAL PRACTITIONER?

The question is answered, as several times before, in the negative. Once more the writer takes up this much-discussed problem and tries to prove that the use of the Bossi dilator is superfluous after the obliteration of the cervical canal, and is a decidedly dangerous procedure before its obliteration. The Bossi dilator can be applied without undue danger only by the specialist. Therefore, in the author's opinion, the vaginal Cesarean section remains the preferable procedure, while the general practitioner must be encouraged to use the colpeurynter. ²Duehrssen, Arch. f. Gyn.

AN UNSUCCESSFUL PUBIOTOMY; SYMPHYSIOTOMY.

F. Jessen (Zentrbl. fur Gyn.): This case was operated on as was Seeligmann's. The pelvis was a flat rachitic one. When the bone was three-fourths sawed through, the saw broke. The resultant hemorrhage was so severe that sutures were at once introduced and symphysiotomy was resorted to. The pelvis was enlarged 6 cm., and the head, already deep, was easily extracted with forceps. Both cervix and vagina were lacerated at a point corresponding to the pubiotomy wound. The symphysiotomy wound healed quickly, but the sawed portion of the bone did not unite, no callus being produced, and tenderness persisting for a long time.

A PROCEDURE FOR OPENING THE PERICARDIUM.

J. H. Bacon, M. D. (American Journal of Medical Sciences): The subject of pericarditis is first considered from a pathological standpoint.

The technique of the proposed operation is given.

A skin incision is made parallel to the midline of the sternum and $\frac{1}{2}$ cm. to its left, extending from the level of the upper border of the fifth costal cartilage to the lower border of the sixth. The incision is deepened until the sternum is exposed. This is laid bare over an area of 2.5 cm. and the periosteum is raised. With a trephine 2 cm. in diameter, a circular window is made in the bone. One opens upon the anterior mediastinum, and the prepericardial fat then comes to view. The fat is dissected away and the anterior surface of the parietal pericardium is exposed. The pericar-

dium is raised with forceps, and an incision is made between them. Exploration and treatment can now be instituted.

The advantage presented by this procedure are:

1. It is anatomically correct.
2. Easy approach to the pericardium by definite landmarks that are readily made out.
3. The best possible drainage afforded.
4. It permits a ready inspection of the heart and the pericardial cavity.
5. It is devoid of mechanical danger,

MEDICAL GLEANINGS.

In uterine inertia from exhaustion, nuxvomica in half-drop doses every fifteen minutes will restore the pain in many cases.

A tampon freely saturated with glycerine has been applied to the os uteri to relieve the vomiting of pregnancy.

A successful man who has the respect of the world is—in nine cases out of ten—a man who understands the art of walking over people without walking on them.

Dr. J. Gordon Sharp suggests that fruits should be eaten at the end of the chief meal.

Less medication and more instrumentation is very often found to be the preferable course of procedure in old and neglected cases of gonorrhea, in which the urethral mucosa has become more or less indurated.

Felons are classed as minor surgery, and yet many a finger has been lost through their careless treatment. Antiphlogistine is a specific in incipient cases. Apply hot, change every six or eight hours, and resolution will as a rule occur without the formation of pus.

The diarrhea, following the eating of tainted food, says Dawson Williams, is easily controlled as a rule by a dose of castor oil, followed by a mixture containing bismuth and opium, or opium with rhubarb and other carminatives. The aromatic syrup of rhubarb—one-half ounce for an adult—may be used to remove the cause. Oil of eucalyptus, ten minims in capsules, is a good antiseptic. The patient is liable to relapse if there is any indiscretion in diet for a week or more.

By reasons of much scrubbing and enforced application of hot water to the hands, many surgeons develop eczema of the hands—especially those who use the permanganate of potash and oxalic acid solutions. To these the remarks of Dr. Prince A. Morrow, of New York, will be of interest. He says: "No application I have ever tried has proved so serviceable in keeping

the skin soft, supple and pliable as the oleate of bismuth ointment, the composition of which is as follows:

- R Bismuth oxide, 3j.
Oleic acid, 3iij.
Cerae alb. 3iij.
Vaseline, 3ij.

The addition of a few drops of the oil of rose renders the ointment more agreeable.

The relation of nasal and accessory sinuses to the eye is important and often overlooked. Stucky finds that not enough attention is paid to the acute form of nasal accessory suppuration, nor is its early recognition fully appreciated. Many cases of paresis and paralysis of the extra ocular muscles, supposedly due to rheumatism or to syphilis, are caused by spheroidal or ethmoidal disease. Stucky has seen one case of ophthalmoplegia external (Laryngoscope), in which Killian's operation gave complete relief. The eye symptoms vary as much as do the size, shape and position of the sinuses. Stucky believes the oculist and the rhinologist should maintain "a closer relationship;" why not?

How to regulate one's fees is a subject well considered by Dr. J. B. Roberts. The physician should have fixed in his mind an estimate of the value of his services, operative or otherwise. The amount should be based on his experience and skill. It should not be so low as to coax away unfairly the patients of his younger and less experienced colleagues. The fee should be lessened when the patient's income would be seriously depleted by its payment. A well-to-do patient should pay the full fee, which should be generous in order to recompense the physician for his expensive education and hazardous life. This fee, however, should not be increased because the physician's services are utilized by a very wealthy person, unless an unusual time is given to the service or an additional responsibility is placed on the physician by reason of the man's position.

For the internal treatment of gonorrhea, the oil of sandal wood in one form or another, has always been the physician's great stand-by. Of late years the virtues of saw palmetto have been discovered, it is sedative, tonic and diuretic. Therefore, the combination of these two drugs makes the ideal remedy; it is called "Sanmetto."

In the wasting diseases, as well as in rickets, scrofula and marasmus it is of the greatest importance that a remedy be selected which will quickly check the pathological condition, and restore the organism to the normal without producing digestive or other functional disturbances. Says the American Journal of Dermatology: Cod-liver oil has always stood first in the category of remedies calculated to bring about

this desirable result, but unfortunately its peculiar odor and taste are features which are quite often objectionable to patients. Hagee's Cord, Ext. Ol. Morrhuæ Comp. is an elegant preparation, containing all the essential therapeutic properties of cod-liver oil and combined with tissue building chemicals (Hypophosphites of Lime and Soda) and aromatics, which renders it agreeable to the palate.

In the days of our grandfathers the country doctor gathered his medicinal herbs every year and prepared them himself. Under these circumstances scutellaria had, and deserved, a high reputation in all nervous disorders. Its active principle is an unstable substance, and ordinary preparations of the drug soon lose their strength. Modern pharmaceutical methods have evolved Neurilla, in which the full activity of scutellaria is preserved. It is well worth a careful trial.

Dr. C. Everett Reid reports the following case in which Glyco-thymoline has given him excellent results: A. W., age seven months, had an increase in the number of stools and had shown considerable irritability for some days. The stools showed fermentation, were green, contained curds and were very offensive. There was considerable abdominal pain, temperature, 103 degrees F. There had been slight vomiting. All food excepting albumen water was cut off. A calomel purge was given (gr. 1-10 every half hour, until 1½ gr. had been taken). This was followed by a teaspoonful of phosphate of soda well diluted in a glass of water, one teaspoonful of this solution being given between the doses of calomel. The bowels were irrigated with hot Glyco-thymoline solution, and after they had been thoroughly acted upon by the calomel, teaspoonful doses of the Glyco-thymoline were given hourly by the mouth. Within eight hours the diarrhea had stopped, the temperature was only 98½ degrees, and the attack had practically ceased. The irrigations with Glyco-thymoline, two tablespoonfuls to the pint, were continued daily night and morning with astonishing and prompt results.

Dr. G. T. Palmer writes as follows:

While eucalyptus has been recognized for many years as a therapeutic agent of the greatest value, it is unquestionably true that its value would be more widely recognized and appreciated in a much broader group of conditions if the oil of commerce upon which the medical profession has had to depend, were of greater purity and selected from the exact species of eucalyptus, recognized as producing the most potent and most valuable product.

While both Australia and Algeria have been sources of supply for eucalyptus, the

Australian oil is generally recognized as superior. And properly selected and properly purified Australian eucalyptus is unquestionably the best for general therapeutic uses. The oil of eucalyptus of the pharmacist is derived from any one of eleven plants and is sold without reference to its origin.

It has been the experience of the writer that the quality of eucalyptus has much to do with the therapeutic results and, within recent months he has been gratified to find in a preparation of carefully selected Australian oil of eucalyptus, known as Mulyptol, an oil which is particularly reliable in action, of definite potency and purity and one from which the most uniform results may be obtained.

In the treatment of superficial ulcers Mulyptol has been found exceedingly satisfactory when applied in the form of the following ointment: Mulyptol, 1 part; soft paraffin, 2 parts.

In either acute or chronic bronchitis, Mulyptol may be inhaled after mixing 5 to 15 drops with half a pint of boiling water, while the paroxysms of asthma are frequently relieved by the same steaming inhalations. The internal administration of Mulyptol, in capsule of 2 to 16 drops on a loaf of sugar, is of additional value in bronchitis.

Mulyptol has been administered in the same way internally in my hands with good results, in gastric or intestinal catarrh and with fairly good results in cystitis.

Results in pertussis have been especially gratifying, following a plan suggested originally by Hardwick's—the use of a spray—consisting of two drachms each of Mulyptol and terebene with 1½ (one and one-half) ounces of alcohol, an hour before each meal and at bedtime. In the writer's experience the paroxysms have not only decreased in severity but in frequency.

In the hoarseness of ordinary colds and especially in pharyngitis, Mulyptol in the form of pastilles are not only effective but very agreeable.

In two cases of pulmonary tuberculosis, considerable relief was afforded the patients by inhalation of Mulyptol in vapor, although it is my experience that the best results are obtainable by prolonged use in some form of inhalation cabinet and not by simple, brief inhalations.

The Medical Era, of St. Louis, Missouri, will conform to its usual custom and issue its yearly series of special Gastro-Intestinal numbers, embracing July and August. The August issue will be given over entirely to the consideration of every phase of typhoid fever. The series will contain about 35 or 40 practical papers, and will contain a large amount of valuable information.

THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 320.
New Series Vol. XIV, No. 191.

New Albany, Ind., August, 1907.

\$1.00 PER ANNUM
SINGLE COPIES, 20 Cts

ARTICLES.

THE CARE OF THE TUBERCULOUS AND THE IMPORTANCE OF INTELLIGENT LEGISLATION AND EDUCATION AS FACTORS IN THE PREVENTION AND CURE OF TUBERCULOSIS.*

By Thos. P. Cheesborough, M. D., Asheville, N. C.

I shall write just about the early diagnosis and certain signs which, when first observed, should make us suspect tuberculosis, for all of us recognize the great importance of an early diagnosis in consumption. Latham, in his most excellent book, "Diagnosis and Modern Treatment of Pulmonary Consumption," says that we must make a positive diagnosis of this trouble.

First. When tubercle bacilli are found in the sputum and there is no source found for them in the mouth and upper respiratory passages.

Second. When hemoptysis—even to a very small extent—is seen associated with suspicious physical signs and when we are sure that the bleeding does not come from upper air passages.

Third. When we find diminished resonance and increased resistance to the finger in percussion, associated with the presence of persistent crepitation and rales in those situations where tuberculosis usually starts. If these signs above mentioned are carefully looked for by all general practitioners we would expect cures in nearly all cases of tuberculosis. But they are not. Like all physicians living in a country celebrated for its climatic advantages, it has been my lot to come in contact with a vast number of these unfortunates, and nearly all of them have passed the so-called first stages of the disease. In fact nearly all the tuberculous who come to Asheville have delayed so long in coming, either from lack of diagnostic ability on the part of their home physician or his unwillingness to tell them of their serious trouble (or to lose a patient) that it does not require an expert to diagnose tuberculosis. An intelligent cab driver or car

conductor can do it, and it is with this class of consumptives that we chiefly have to deal, and of whom I am writing.

One of the greatest disadvantages that I have found in treating this disease is that the poor unfortunate, when at last his disease has been diagnosed, and he has been sent from home and its comforts, has been advised by the home physician not to consult any one here, but to exercise and drink whisky and to come home in a few months cured. These things he does until finally, after having wasted much time and having steadily grown worse, he consults us and we find that he is running a high temperature and has a disordered digestion and all the evils that accompany them. We have first to convince him that he has been pursuing the wrong course, that rest—absolute rest—is of the greatest importance and fresh air all the time, night and day. From his infancy he has been taught to fear God's beautiful fresh air, that never yet has done any one harm, taught to shut it out from his house, to live in close, stuffy, over-heated rooms. When at last we have persuaded him to sleep out and to live out in the open air, he begins to get better, but still coughs and raises. They want this stopped, and if you are not careful you will find that they are taking some cough remedy that they brought with them, a cough medicine full of some sedative that ties up the secretion and prevents drainage, and drainage is what they want. Drainage to clean out the accumulated mucus, pus and bacilli, and if we do not get drainage we will soon have chills, fever and sweats, and with these our patients grow steadily worse. I find it very difficult, but very important, to teach them that they must cough in order to get rid of the vast amount of mucus, pus, etc., that is always secreted when mucous membranes are inflamed. And night sweats, too, are in my mind, just another manifestation of Nature's efforts to rid the system of poisonous and deleterious products. I do not give drugs to stop night sweats, but try to remove the causes. These are simple points that years of experience have taught me to respect.

Next to rest in the open air comes nourishment. Do not stuff and overfeed, but make your patient eat all the good, nourishing food that they can possibly digest and assimilate, and all persons suffering with

*Read before N. C. Medical Society.

consumption (a good name for them is a consuming going on all the time) require much more food than those who enjoy health.

Instead of cough medicine I find that by carefully clearing the upper air passages by means of antiseptic and alkaline washes in sprays, and deep inhalations of some of the soothing, oily substances in sprays and depurators, that we soon, make them raise easily, and by thus getting rid of the offending matter, there will be no necessity for much coughing. The so-called useless cough usually comes from an inflamed larynx and this must be treated accordingly. After the patient has ceased to run a temperature and has regained his lost weight, or, in other words, the active tubercular process has become arrested, then we should allow him to exercise, or, in other words, to live a healthful, normal life.

In regard to legislation as a means of prevention and cure, I realize that it will take time to accomplish much, but good can be accomplished at once. While the refined, wealthy and educated consumptive expectorates his 500,000,000 tubercle bacilli per day, the same as his poor, unfortunate brother, who has not a change of linen, the former—if he be refined and educated—has learned how to destroy his sputum so that he almost ceases to be a source of reinfection for himself and infection for others. The latter does not know and expectorates any and everywhere.

First. There should be strict legislation in regard to expectoration.

Second. All large corporations employing large numbers of laborers should be compelled to have their employees examined whenever there is the slightest signs of pulmonary trouble, and when the disease is present, either the corporation, town, State or United States Government should remove that patient to a suitable place and support him or her until cured. Every hotel and boarding house in our State should be compelled to have certificates from a competent health officer that all of its rooms in his house have been thoroughly disinfected after being occupied by any ill person.

North Carolina should not allow a sleeping car to pass through her borders without such a certificate; and right here I wish to say that the sleeping cars are a very prolific source of spreading all kinds of infection. I have seen the poor, dying consumptive, even when accompanied by a physician and trained nurse, expectorate on those horrible colored blankets that most of the sleeping cars use, and on the edges of the berths. What is the result of this? At the end of the journey the patient leaves the car and the sputum that has dried on the blankets and berths is left there for the next occupant to inhale.

All public and private schools should be carefully watched over by the health officer, and the children taught how to take care of themselves, and not to expectorate promiscuously.

The officers who should be the sanitary guardians must be men chosen for their ability and not merely from political influence.

To sum up: Let us teach our children at home and in schools how to live. Let it be compulsory for every one of them to show certificates of good health, just as they now have of vaccination.

Let all employees of large corporations be examined and cared for by their employees, town, State or United States Government, when suffering with tuberculosis, thereby insuring an early diagnosis and cure.

Let all sleeping cars be thoroughly disinfected at the end of each journey.

Let every public building, hotel, boarding house, factory or office, etc., show certificate of disinfection as often as the health officer thinks best.

Let it be a crime to expectorate where the sputum may become a menace to good health.

Let these few simple rules be carried out and in a few years we will accomplish more in the way of curing and preventing the "Great White Plague," than has ever yet been accomplished by all the serums, toxin, antitoxin and drugs in the pharmacopeia.

CHRONIC FIBRINOUS MYOCARDITIS.*

By Frank E. Nabors, Ph. G., M. D., Birmingham, Ala.

That chronic fibrinous myocarditis may occasionally so dominate the pathological findings at an autopsy as to be considered the main lesion and therefore be an entity is, as far as the literature shows, a widely accepted view. But that such a pathological condition necessarily produces symptoms and signs definite enough to form a recognizable clinical entity is a subject of doubt, it being a matter of impossibility to establish a fixed relationship between the clinical picture of supposed cases of chronic myocarditis on the one hand, with the post-mortem evidence on the other.

The interdependence of physiology and pathology is nowhere more beautifully shown than in the study of valvular lesions of the heart; and with a knowledge of this association in mind the clinical features of these lesions are usually of easy and satisfactory interpretation, and therapy in its widest sense may be most intelligently employed.

Such an harmonious relationship between

*Read before Medical Association of State of Alabama.

cause and effect is, I feel, entirely wanting when one comes to consider the class of cases with which this paper deals.

The literature of chronic myocarditis is voluminous, and from the standpoint of the clinician, extremely unsatisfactory. Dr. Carnac recently, in an able and interesting essay, presents, by a series of charts, practically all that is really known of the pathology of this subject, as well as the generally accepted ideas of the clinical side, concluding with the significant remark that, "in the present state of our clinical knowledge of chronic myocardial disease we can consider only whether the muscle is competent or incompetent. Finer differential diagnoses, so commonly indulged in, are mere terms, bewildering and dissipating the attention of the clinician from closer observation." And this position in a general way is the one held by the magins to fail that one has signs and symptoms which are really referable to the heart per se.

The repeated attempt by various observers to correlate clinical observations with autopsy findings have not been productive of much clinical help, although large series of cases have from time to time been critically analyzed with this end in view. Cases believed to be chronic myocarditis, showing a fairly normal myocardium postmortem and myocarditis found at the autopsy where it was unsuspected during life. As far as I have been able to learn, the cases diagnosed chronic myocarditis in which a competent myocardium was found at death, degenerative changes were found in the vascular supply of various organs—a point to which I shall again refer.

The heart may show a considerable fibrosis and still be competent, as Rolly, Hasenfeld and others have shown experimentally. And it is the general feeling of clinicians that as long as the cardiac reserve is adequate that signs and symptoms about which one may be confident are wanting. Before pursuing this phase of the subject further, let me put before you briefly the general outline of cases usually diagnosed chronic myocarditis. The patients are commonly men of middle age who have "lived well and worked hard," and usually seek medical advice only when some such alarming symptoms as dyspnea, pain in the region of the heart, or perhaps a persistent vertigo convinces them that something is seriously at fault. One finds upon inquiry that for some time before medical advice had been sought slight departures from the normal have been noticed; lack of interest in business—the patient worries easily and often over trifles—is incapable of doing his usual quota of either mental or physical work—has slight digestive disturbances—sleeps only indifferently well, feels weak; in short, a picture

of a tired-out man—a neurasthenic. Among the more specific symptoms assigned by some writers to the earlier stages of myocarditis are: Insomnia, which is often obstinate; somnolence, severe and frequent headaches, unexplained by dietetic errors or other obvious causes; vertigo, for which no cause can be found, is added to the list. Syncope, ordinary fainting attack, has by some English writers been dignified by the qualifying prefix of myocardial in the class of patients I am suggesting to you.

Angina pectoris occurs in a fair proportion of cases diagnosed myocarditis antemortem, and is considered by some as a symptom of cardiac fibrosis. Now, as a matter of fact, no one knows positively just what underlying condition is responsible for this terrible affliction. Its association with coronary sclerosis is so constant that the majority of us tentatively consider this association to be more than accidental and perhaps causative, but against this is the fact that coronary disease is extremely common after 50, while angina is rare. Again, it is met with in individuals whose coronaries prove to be healthy at the postmortem. Of the mental manifestations referred to, myocarditis is an etiological factor in which the association of mental and physical symptoms are regarded as more than accidental, there are quite a variety; but that there exists any logical connection between these abnormal mental states and a cardiac fibrosis, I doubt. One unquestionably sees most distressing mental symptoms now and then in aortic valvular disease, but here they are not so difficult to understand.

The physical signs are as indefinite as the general symptoms. It is said that the pulse may be either slow or fast, the majority of writers preferring the slow pulse. It is said to be often irregular, either in rhythm or volume, or both. However, such a careful observer as Dr. Sansom says that from the study of a large series of cases, showing symptoms referred to the heart, he has reached the conclusion that no disturbance of pulse rate can be taken as an index of the state of the myocardium. About the heart itself there is great uncertainty—the first sound is said to be muffled, distant and often prolonged—it is described by others as simply weak. Duplication of sounds over base or apex is regarded as a diagnostic point by some. These split sounds are not uncommon in the young and healthy, and are by no means the rule in cases said to be myocarditis. My own feeling is that they are without significance and of interest only to the curious. So, given a man at or about the middle of life with some precordial distress or pain on exertion or after a full meal, occasional at-

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tacks of vertigo, or syncope—severe headache, perhaps a slow and irregular pulse, the heart practically normal in size and sound, and giving a history of not having been up to the standard for some time, one is not to be censured in suspecting chronic myocarditis. If this individual has, in addition, dyspnea, attacks of cardiac asthma, even though the physical signs tell us little beyond the fact that there is some ventricular dilation, which may be temporary, chronic myocarditis is diagnosed. Excluding all cases of failing or failed hearts from valvular disease, all hearts in which incompetency has supervened on hypertrophy from high arterial tension, there remains, it would seem, two great groups of cases in which cardiac symptoms, as now interpreted, are prominent or dominating features.

In the first group, were it not for some such complaint as dyspnea or precordial distress, neurasthenia would be the probable diagnosis. In neurasthenics one not infrequently finds a slightly dilated heart with a systolic murmur at the apex; and practically every variety of pulse abnormality has been described in cases of neurasthenia, with all of the subjective symptoms now ascribed to organic heart lesions.

Then there is the group of cases with features that warrant one in holding that some organic changes are responsible for them, and I tentatively suggest that a rational explanation for many of the so-called cardiac symptoms might be found in regarding these as cases of arteriosclerosis of the cortex, bulb, aorta or splanchnic arteries, and not of myocardial fibrosis. In making a diagnosis of arteriosclerosis there are several general facts which should be kept in mind. The finding of one or more of the superficial arteries palpable does not necessarily indicate a widespread mischief, and the converse of this proposition is also true. The aorta, coronaries or bulbar arteries may show advanced degenerative changes with fairly good superfcials, and, as Dr. Janeway states, it has been established that with the escape of the splanchnic arteries or aorta, blood tension is not raised and the heart is not hypertrophied, even where advanced arteriosclerosis exists elsewhere. As an additional clinical fact, it is common knowledge that the heart often remains competent for years after the radials have become beady. (Babcock.) The arteries of the cerebral cortex alone may show advanced changes, as every one knows, and these cases show many of the symptoms now charged against a cardiac fibrosis, as, for instance, headache, vertigo, syncope attacks, slow and irregular pulse. These general facts are here restated to emphasize the point that arterial change is likely to be extremely irregular, especially

so in syphilitics, and that clinical expressions are dependent upon the disturbances of functions in the regions most affected and that arteriosclerosis is not a condition which always admits of easy diagnosis.

Now, your essayist asks:

First—Do we now recognize any sign or symptom or symptom complex by which a clinical entity may be established and called chronic myocarditis?

Second—Is there not too great a lack of sympathy between ante-mortem diagnoses and post-mortem findings to warrant us in making such diagnoses, satisfying our minds that we have solved the problem, and thereby closing our eyes to further study of the case?

CONSTITUTIONAL TREATMENT IN LOCAL DISEASE, WITH SPECIAL REFERENCE TO DISEASES OF THE EYE.*

By Herbert T. Clough, M. D., of Bangor, Me.

It must be evident to any thoughtful person that every part of the human body is related to every other part; that the various structures are so interdependent that none can exist by itself alone. This interdependence applies not only to the mere life of an organ, but its function, in order to be carried out at the highest efficiency, depends upon the perfect performance of all the organs of the body. We know, too, that many of the organs have in recent years been found to possess besides their well-known function, at least another, and perhaps still others not yet discovered, of adding to the system some substance which influences the body as a whole; in some cases being of vital importance, in others, while not vitally important, extremely necessary to the highest welfare of the individual. The testicle, for instance, aside from its generating function, pours into the system a secretion little understood, it must be admitted, but nevertheless, important in the well-being of the male. Use of this knowledge of the effect of depriving the system of this internal secretion has been made for ages in altering the male voice for singing purposes. While this dual function is known to exist in some of the organs, it may apply to all of them, as we shall some time learn. It is, therefore, plain that an organ is not only influenced by the body at large, but may in turn influence the body, not always by internal secretion, perhaps, but in some cases by that subtle nervous influence which is difficult to explain, yet constantly observed.

The true physician, then, in his war against disease, must examine, not only the complaining organ, but all others as well, to

*Read before Maine Medical Association.

see how much they may be contributing towards the trouble with the complaining one; and so great may be that influence that it is often necessary to ignore altogether treatment of the organ apparently at fault, and confine it to another, it may be, quite remote. A heart, for example, which is structurally perfect, may show weakness, because of a stomach which is not doing its work, or to obstruction somewhere in the circulation, which is throwing more work upon the heart, and thus exhausting its power. Every physician could cite hundreds of cases of this interdependence of the organs as good an example as the following: A young lady who had previously enjoyed good health, but of a tubercular family, developed cough, hoarseness, and elevation of temperature. These not disappearing in due time, her physician became suspicious of tubercular laryngitis, and the services of a laryngologist were sought. He found swollen false vocal cords, but no other evidence of tuberculosis. Local treatment for several weeks being unavailing, a thorough examination of the body revealed an enlarged liver. Treatment of this very speedily restored the patient's voice, and cured her cough.

In the light of these facts, how irrational it is to attempt to treat an organ purely by local means, and how far short of the mark must he fall who does so, although, of course, local measures alone are all that is needed in many cases. The true specialist must strive to be a man of broad gauge, and constantly on the alert for all general conditions which have local manifestations, since treating local symptoms alone, when the system is at fault, leads to certain disappointment and disaster.

This interdependence of one organ upon another; the relation of a part to the whole, and the whole to a part, is best shown in a study of the eye, since the eye is more amenable to study than any other organ, and because the eye represents a greater variety of the fundamental histological elements than any other.

That the eye stands far in the foreground of all special medical branches is a statement which can not be refuted, and it best illustrates the necessity for a broad-gauge diagnosis of its ailments for their proper treatment, since many of the most urgent local symptoms are wholly beyond the help of local treatment, and relief must be sought by removing the systemic fault. For example: A patient consults an oculist for increasing dimness of vision. The oculist finds albuminuric retinitis or retro-bulbar neuritis. Of what use is local treatment? Absolutely useless. Here is where specialism is of great benefit to general medicine. In many cases the patient's first symptom of trouble is in some remote organ, especially

the eye. One who is skilled in eye troubles will often discover the approaching storm long before it is manifest elsewhere, and thus the patient is given the advantage of early treatment for a disease which, if neglected, might work irreparable damage.

It is unfortunate in many respects that some eye troubles yield to purely mechanical means, because it has given birth to a large and growing class of pretenders, who, some honest, some dishonest, all without any medical preparation, are posing before the public as oculists, and attempting to cure eye diseases and many nervous disturbances by fitting glasses. While it is true that many cases can be relieved in this manner, it is also true that very many such patients, besides presenting refractive error, have other symptoms which would be revealed to the skilled ophthalmologist, about which those untrained to medical matters know nothing. This is purely a medical subject, and should be dealt with wholly by medical men. The fact that some cases can be relieved by mechanical means alone does not alter the situation. So, too, could druggists prescribe with more or less success.

Here is a case in point. An anemic school girl finds herself suffering from asthenopia, and knowing that a friend, perhaps, has been relieved by glasses, seeks an optician, who, of course, finds refractive error and prescribes lenses, and the patient goes her way. She soon finds, however, that glasses bring only temporary, if any relief, and thinking she has been poorly fitted, she now consults an oculist, who finds the fault in the system. This the optician could possibly know nothing of. In such a case, provided there had been some relief from glasses, it would have worked injury to the patient in the end by allowing the real trouble to go on in the same way. The eye was a part to complain first, because it is one most used, and the refractive error may have added to the load, but the main trouble was in the system, and attention should have been directed to the systemic fault.

Again. A middle aged man suddenly discovers he can not read as easily as formerly, thinks it due to presbyopia and goes to an optician for relief. He has presbyopia to be sure, but he also has other symptoms which a skilled oculist would have probed into to the everlasting benefit of the patient; but the optician, knowing nothing of this, prescribes glasses, and the patient, resting easy in the assurance which the man of glasses has given, goes his way happy. He soon finds, however, that he is not relieved, and this time seeks an oculist, who discovers actual disease of the eye. Now such cases are not merely hypothetical, they are encountered daily in the practice of every oculist. Cases where blindness or disease might have been foreseen, or death prevent-

ed, if a competent oculist had first been consulted.

For the highest good of humanity—and that is the object of all medical practice—the oculist, or other specialist and general practitioner must co-operate; for while specialists are not infallible any more than general practitioners, they can often assist the general practitioner in a diagnosis, and thus help institute the proper treatment. Quasi knowledge is, as has often been said, a dangerous thing, especially in medical matters, because it inspires in the patient a false confidence, and delays proper treatment to the increase of the disease if not to the permanent detriment, or even death, of the patient. Do not understand me that local treatment is useless. It is in many cases all that is needed, but generally speaking, constitutional and local treatment must go hand in hand to insure the best results. The writer has seen many cases of eye diseases which were but the reflection of a constitutional fault, fitted to glasses, when a few doses of medicine would have averted the trouble.

THE X-RAY IN MALIGNANT GROWTHS AND OTHER PATHOLOGICAL CONDITIONS.*

By C. M. Greiner, M. D., Jacksonville, Fla.

In recent years literature upon the application of the X-ray in malignant growth and some other pathological conditions has become quite extensive. Some writers lauding it to the skies and using it as a "cure all," at the same time hiding under its mystic phosphorescent light their superficial knowledge of its proper sphere of usefulness and the manner of applying it under different conditions.

We find others who, for various reasons, are antagonistic to X-radiance, perhaps on account of its failure to produce beneficial results in some severe refractory malignant growth located where the blood supply is vigorous, and its location inaccessible for proper raying conditions.

Fortunately, there is a happy medium in all therapeutical measures, and it is my desire to try and strike the middle ground.

The X-ray, as a therapeutic agent in malignant growths, has been in use since 1896, and after nine years of its use we are able to allot to it its proper status and some of its limitations. This assertion is made advisedly, and I will make the point clear by an explanation. A great number of the laity look upon the X-ray as a very mystic and mystifying affair, going to the extreme of asking for an X-ray examination of their four-months' pregnant wife to decide the sex of the embryo. Very recently I have

read an article on sterility among X-ray operators, a synopsis of which is as follows:

"The semen of a number of physicians who have used the X-ray a great deal in their office practice have been examined for spermatozoa, which were found to be few in number, and the normal motility of healthy, vigorous spermatozoa was wanting.

"They had been previously virile. The X-ray does not destroy the sexual instinct, but it is claimed that its influence is exerted on the reproductive secreting function of the sexual apparatus."

Like every other therapeutical means, its limitations as well as its injurious effects can only be learned by clinical use and scientific methods of research, which often require a great amount of patience and sufficient time to elapse after discontinuing treatments.

Summing up the reports of a number of physicians and surgeons who have had ample experience with the use of the X-ray alone in malignant growths, as well as combined with surgery, the consensus of opinion is that the removal by excision of large carcinomatous growths wherever permissible is the proper treatment and should be strenuously advised, as the destruction of the mass by the X-ray is very apt to cause a toxemia. On the other hand, surgery alone does not give as high a percentage of radical cures as the combined use of surgery and X-radiance.

"Nothing succeeds like success" is a very popular and common expression used superficially, but by delving deeper into the philosophy of human endeavor we find that success is the outcome often of repeated failures and mistakes.

I have had the opportunity of treating two cases in the last year which were inoperative on account of the location of growth and the condition of the general health, who died from the effects of the inability of the organs of excretion to throw out the toxins of broken down tissue, and a febrile reaction, etc., appears, which the patient may sometimes call billousness, but to the doctor it is a signal to discontinue X-ray treatment temporarily until, by means of eliminatives, the system has gotten rid of the abnormal amount of toxic materials.

The best results that experience has taught us in a case of carcinomatous breast is to X-ray it from two to four weeks, then to excise it, and as soon as possible after the surgical removal of the breast to continue X-radiance. In using X-ray in carcinomatous breast before removing it we find it is not necessary very often to disturb the glands in the axilla, even if they are slightly enlarged and sensitive, as many cases are on record who were X-rayed previous and following entirpation of the

*Read before Florida Medical Association.

breast, leaving the axilla undisturbed, whose recovery was good and no recurrence for several years after the combined method was used. There are also cases on record whose breasts had been removed in the early stage and, recurrence taking place, a second surgical procedure being inadvisable, the X-ray was used to retard the growth and stop pain, etc., with the results in some cases of a seemingly radical cure, as one and even two years have elapsed with no recurrence, and continued good health.

Statistics verify my previous remarks, and my personal experience is along the same lines.

The philosophy concerning the above statements is as follows: Taking it for granted that the X-ray used in proper dosage breaks down tissue, which being cancerous is intrinsically a toxin (and more so if we have a mixed infection present), therefore the absolute necessity of removing the large growth surgically whenever possible, instead of driving the toxins through the system. The use of the X-ray in mild dosage has a tonic action on tissues, and its action on the blood vessels and lymphatic system is tonic in character. It has been observed by means of the microscope that the caliber of the blood vessels is smaller and the lymph glands are shrunken, and if, raying is carried on further a degeneration or atrophy of tissues is brought about. Therefore by X-ray treatment previous to extirpation the outlying cancer cells are destroyed and metastasis is guarded against, which is the weak point in late surgical removal unaided by X-radiance.

Dr. Theodore McGraw, who spent the last twenty years of his life studying in the comparatively unknown field of malignant growths, has often repeated in his lectures, viz.: "Cut early, and cut wide and deep, for that is the only proper method for dealing with diagnosed malignant growths."

The above advice was given before the X-ray was in practical use. I remember vividly as a general practitioner the first case of carcinoma of the breast I came in contact with.

A woman aged thirty-six years, mother of eight or ten children, nursed her last child ten months, and at that time directed my attention to a small growth in her left breast, which was accompanied with darting pains in the axilla and arms, etc. I watched its course for two weeks and advised consultation, called in an old army surgeon, and he decided it was noncancerous. Not being satisfied, I called in another surgeon and we took a specimen of the growth and had it examined, which decided an early operation. One week after we took off the left breast, including the underlying pectoral muscles, but did not deem it wise to take out the axillary glands on account of her

general weak condition, etc., as they were not enlarged, although rather sensitive. She had marked cachexia before the operation, which gradually disappeared, and recovery and healing of parts progressed rapidly. Six months afterward she came to my office, and on examination I found three or four nodules in the scar of the incision which were rapidly growing larger. She would not allow a second operation, and in six months was a corpse.

This is unfortunately the life history of many a case of malignant breast in times gone by, although extirpation is carried out as wide and deep as the parts will allow, and as early as possible, but in the surrounding tissues there remain carcinomatous cells which are impossible to cut out and still retain sufficient tissues to bring the parts together, or to excise tissues which would endanger life. X-radiance makes it possible to cope with those cases, and, combined with surgery, the percentage of permanent results is much better.

In neglected or post operative cases of malignant growths the X-ray in most cases relieves the pains, even when the patient had been taking large amounts of opiates without benefit.

A case of carcinoma of the tongue, which I treated about a year ago, typifies this phase of the question very well:

Male, age about 60, had weighed previously about 200 pounds, and was in robust health. When I first saw him his tongue was eaten out entirely and the growth involved the left tonsil and through the floor of mouth to left side of neck, involving all the lymphatic glands on the left side of neck, including the occipital glands; his chin was drawn down, being unable to raise it, and suffering extreme continuous pain radiating all over the head, was taking four to ten grains morphia daily. I rayed him tri-weekly, and in two weeks he suffered very little pain from that time on to his death, which took place about five months afterward from exhaustion, although he was drinking about three or four pints of milk and taking six or eight eggs per day. In epitheliomatous tissues about the face and nose X-radiance should be considered the method of choice, as in most of those superficial lesions we are able to obtain rapid and permanent, as well as aesthetic, results.

Those doctors who have taken the necessary time to study their apparatus used to produce the X-ray and understand its various parts are on a basis to administer in a given case a proper degree of radiance or X-ray dosage to obtain the desired results without injury to the patient bearing the so-called idiosyncrasies, which we have to deal with in all of our therapeutical measures.

The general rule is that blondes are more

susceptible than brunettes. Regarding the quality and quantity of X-ray dosage, we must consider, viz.: (1) The condition of the vacuum of the tube. (2) The distance of the tube from the parts under treatment. (3) The susceptibility of the patient, and the condition of the tissues treated. (4) The length of time of exposure and the frequency of the repetition of same. (5) The amperage of electric push power sent through the X-ray tube, whether generated by means of a static machine or coil.

In lupus, tubercular joints and adenitis we can depend on obtaining better results than with any other known remedial agent.

Tubercular joints, if containing pus, should be aspirated and injected with an emulsion of glycerinated iodoform and then X-rayed through fixations splints.

If the bone is not necrosed, results are soon evident.

In tubercular adenitis, a medium dosage given bi- or tri-weekly is curative. Lupus, if not of long standing, yields readily.

I am now treating a case of lupus, involving the face, which is of thirty-six years' standing. Mrs. X., age about 65, noticed a small growth on the tip of her nose thirty-six years ago; had it treated in various ways for six or eight years. As it kept increasing in size, she went down the State to a so-called cancer doctor, who used a plaster on her nose, and when she finished with him she found the tissues of one side of her nose destroyed and also the lachrymal duct. Eventually her eye was extirpated. About six months ago she came to me for treatment, with a large open raw sore, bleeding on slight touch, with a large, hard swelling extending from the external angle of the superciliary ridge back over the molar arch to within half an inch from the tragus.

One side of the nose was eaten through to the bone, and involved the wing of the other side of the nose. She suffered a great deal of pain. I gave her two or three treatments per week, medium dose and short duration. The pain soon disappeared, and it started to heal over and the swelling went down considerably.

I am still treating her, and her general health is improved. She has very little pain, and the skin has covered over the denuded surface, with the exception of a spot the size of a half-dollar in the orbital cavity.

In obstinate eczema, psoriasis, ulceration, acne and syphilis, we have an agent in the X-ray, properly used, of decided value, by means of which we can expect comparatively quick results, and very often they prove permanent.

In conclusion, I would make this statement. The mortality in malignant growths treated by plasters or surgery alone being

so high, in justice to the patient, as well as to the family physician, it is proper, according to moral ethics, to use every means at our disposal to battle for human life, instead of using one agent alone. We may compare our therapeutical armamentarium to a circle, each radius of which would represent a single or a number of remedial agents at our disposal to combat deviations from normal health. The physician is a better physician who can acquire himself of negligence when his patient is at death's door, being fully aware of the fact that he has used every and all measures to attack diseased conditions, although his patient goes the way all mortal flesh must go some day.

ETIOLOGY OF CIRRHOSIS OF THE LIVER.*

By S. M. Crowell, M. D., Charlotte, N. C.

However many varieties of hepatic cirrhosis there may be, and whatever the modus operandi of the production of each morbid state, there is, in all forms, an increase of the interlobular connective tissue which in one variety becomes cicatrized and the liver is reduced in size, while, in another variety, the corresponding connective tissue becomes hypertrophic and the organ progressively enlarged. In both varieties the tendency is to disturb the normal anatomical relations of the hepatic tissues, and subsequently pervert or eventually destroy the functions of the liver unless the causal factors are removed.

This pathological process is called chronic inflammation, ultimately leading to cirrhosis of the liver, which is characterized by various phenomena of the gastro-intestinal biliary, circulatory and cerebral organs.

For a working hypothesis, I shall subdivide cirrhoses into three (3) principal varieties after the classification of Nothnagle (Neutnogle) and others of international repute. This classification has reference to the pathology of the three (3) varieties, and is as follows, viz.: (1) Atrophic, (2) hypertrophic, and (3) biliary, the frequency of the occurrence being as above named. The varieties are differentiated microscopically by the beginning point of the morbid process, and macroscopically by the size of the liver and certain pathological phenomena.

PHYSIOLOGY OF THE LIVER.

In order to more intelligently present the subject of cirrhosis it is necessary to briefly review a part of the physiology of the liver.

(1) The liver acts as a natural filter or purifier for the blood from the portal system, its cells abstracting any foreign toxic or ef-

* Read before Medical Society of the State of North Carolina.

fete matter from the blood and eliminating said morbid products from the system through the various biliary channels into the gut, and are thus normally eliminated from the system.

(2) The liver is a secretory as well as an excretory organ, elaborating the antiseptic bile out of the materials supplied by the portal blood. Therefore, it might be called an organ of various functional activities, the chief of which is possibly to furnish the fluid bile, which conveys into the gut the toxic materials collected by the portal system from the septic gastro-intestinal tract. If the normal arrangement is kept in operation, any reasonable amount of toxic or effete material is eliminated from the blood, and the integrity of the gastro-intestinal tract, the liver and other organs is retained. In case there is a gastro-intestinal disturbance and consequent derangement of hepatic cells, and lowered power to perform their functions, then there will be a preponderance of toxins, ptomaines, etc., in the portal circulation or system. This is true especially in middle or advanced life, when the vitality of all tissue cells is lowered. With the above conditions the liver fails to properly functionate, and easily succumbs to the attacks of the various pathological agencies.

(3) Chapman says: "The bile still retains, to some extent, its aseptic properties in the alimentary tract, preventing fermentation, the formation of gases, etc., and that it is a good lubricant, acting, possibly, as a natural laxative, and that it emulsifies the ingested alimentary fats, rendering them assimilable." For example, in many of the acute infectious diseases, the micro-organisms and their products are eliminated by the liver, through the alimentary tract. But any condition bringing about a gastro-intestinal indigestion and perversion of function of the liver cells will retard elimination of the various toxic or effete materials.

Chronic alcoholism and many other chronic diseases, as pulmonary tuberculosis or cancer in various parts of the body we are told by our most competent American and European authors, are among the important factors in the production of the gastro-intestinal perversions which are conducive to the various stages of chronic hepatic inflammation and subsequently the development of cirrhosis of the liver.

Accepting the conclusions of the above authors, combined with my own studies and observations, for a working hypothesis, I feel safe in making the assertion that any habit or practice producing a morbid condition, existing a sufficient time to bring about a state of the gastro-intestinal tract sufficient to pervert or destroy its functional activity, will form a favorable condition, and consequently a medium for the lodgment, retention, development and propagation of the

various micro-organisms whose product, to my mind, are the factors which directly produce a hepatic cirrhosis.

Alcohol in its various forms is pre-eminently the most common predisposing factor in the production of the above cirrhotoses. It is not at all probable that this cirrhotic state of the liver is produced by the direct or chemical action of the alcohol on that organ. We adhere to the more plausible hypothesis that the alcohol first produces a gastro-intestinal irritation, impaired indigestion and assimilation, and subsequently a disturbed anatomical relation and perversion of said organs; i. e., indigestion and the formation of a favorable medium of the undigested food for germ propagation, ultimately resulting in inflammation and the destruction of liver cells and the formation of fibrous tissue which replaces the destroyed liver cells, hence cirrhosis of the liver as a result of the absorption of certain toxic elements, by the portal vascular system from the septic alimentary tract, which is due to the previously explained faulty metabolism. Naturally, when so disturbed, the liver can not exercise its normal functional power over the preponderance of the toxic matters absorbed by the portal system from the pathological alimentary canal, and that the cells of the mucous membrane are so lowered as to more easily admit into the circulation a portion of the poisonous matters that should be eliminated through the intestinal tract. Ordinarily the liver arrests, renders inert or eliminates such poisons from the system, but when involved as above, eventually succumbs to cirrhosis. In looking up the literature on this subject, we find that Boix (Buie or Boye) of France has also come to the conclusion that hepatic cirrhosis is due to the absorption from the deranged alimentary tract, toxic matters, or more especially the products of fermentation. In his experiments upon animals, he treated a large number with lactic, acetic, butyric and valerianic acids, and obtained cirrhosis of the liver. He then combined alcohol with these various acids, and again produced a more typical atrophic cirrhosis. Boix having demonstrated on animals that the absorption of the by-products of intestinal indigestion toxins, etc., is the direct cause of hepatic cirrhosis, and having associated with cirrhosis, in man, an early history of gastro-intestinal indigestion and its consequences, one could logically conclude that anything producing a chronic gastro-intestinal indigestion, would be a factor in the production of cirrhosis of the liver.

THE OPIUM FACTOR IN THE PROTECTION OF HEPATIC CIRRHOSIS.

Although alcohol is one of the most common predisposing factors in the production of indigestion and its sequelae, hepatic cir-

hoses, opium, in our experience, is also a very prominent etiological factor in cirrhosis of the liver, and a hypothesis which I have never seen advocated. But, considering it from a toxic standpoint, it appeals to my mind as a reasonable and logical phase worthy of study. I have in my practice encountered several cases of cirrhosis, especially the atrophic variety, in which I could attribute no other cause of the pathological state than chronic opiumism. I have at present a case—a lady 60 years old—whose history is absolutely devoid of alcohol as well as the other etiological factors, but has been addicted to the use of morphine about ten or twelve years. She now presents all the typical symptoms characteristic of cirrhosis of the liver. It is useless for me to rehearse the conditions brought about by the habitual ingestion of opium, and more especially its detrimental action upon the digestive process. According to Chapman, opium destroys the phagocytic action of the leucocytes, thus increasing the eliminative work of the liver and kidneys. This, coupled with the increase of the absorption of the by-products from the deranged intestinal tract due to the action of the drug on the digestive secretions, produces the chronic inflammation which eventually leads to cirrhosis.

CANCERUM ORIS, WITH REPORT OF A CASE*

By Zachariah B. Chamblee, M. D., North Birmingham; member of the Medical Association of the State of Alabama.

'Cancerum oris, gangrenous-stomatitis or noma, as it is sometimes called, is an affection characterized by a rapidly progressive gangrene, starting on the gums or cheeks and destroying the tissues very rapidly. This awful disease is, fortunately, a very rare one, and occurs only in children, and under very bad hygienic and sanitary conditions. Children between the ages of two and five years are most usually affected.

This disease is said to be a secondary disease, always following some acute disease and never occurring primarily. In more than 50 per cent. of the cases it is secondary to measles. It also follows scarlet fever, and next in frequency typhoid, although it may follow any of the acute diseases. It begins as an ulcer on the buccal mucous membrane, on the gums, or roof of the mouth. It is very insidious in its onset, and an ulcer of considerable size may be found before any attention is directed to the child's mouth. In most of the cases the ulcer begins on the left side of the mouth, and soon a brownish, swollen induration ex-

tends around to all adjacent parts. This sloughing ulcer soon destroys the gums and perforates the cheeks and a portion of the tongue; and, if the child lives many days, may involve the nose, eyes and ears, and in fact other parts of the body.

Clinically, a more pathetic scene can hardly be met with than that of a child dying with its tongue protruding, swollen, and sloughing off, and emitting a horrible odor; and the worst of it is nothing that mortal man can do will alleviate the little one's suffering, the child dying in a week, or at most ten days.

In mild cases, when the gangrene is not so destructive as to cause death, the child will be left with a perforated or very much deformed cheek, the bones being often partially destroyed, and sometimes having a stiffening or ankylosed jaw. Naturally, in so severe a local disease as this, the constitutional symptoms would be grave; usually the gastro-intestinal symptoms are early and severe, due partly to the irritating sloughs being swallowed directly into the alimentary canal. There is usually also a severe diarrhea and a high temperature, ranging from 103 to 105 F. The child is very restless and may have chills during the course of the disease, due to septic poison. The child is very often bathed in profuse sweat; sometimes due to the difficulty in breathing, also to disturbed circulation. The pulse is very rapid and the prostration is extreme. Lingard has described a thread-like bacillus which he finds constantly in cases of noma, but just what relation this bacillus plays in the causation of this disease is doubtful.

TREATMENT.

The treatment is very unsatisfactory. The disease is often far advanced when the case falls into our hands, usually a large sloughing sore is already present. Antiseptics are to be employed freely, and of these a solution of copper sulphate applied freely over all of the involved parts is one of the best. Formaline, iron, glycerine, iodine, chlorate potash, nitrate of silver, either stick or in solution, carbolic acid, the Pacquelin canterly and fuming nitric acid are probably the most effectual, and should be applied early if much good is hoped to be accomplished.

The child's constitutional condition is to be looked after with the greatest care, for to support the patient and render his resistant power as great as possible is the only hope in any treatment. Strychnia, brandy, beef juice, iron and concentrated nourishment are recommended. Nutritive enemata, such as are recommended for stricture of the oesophagus, should also be tried, when the condition of the throat interferes to any extent with deglutition. Fruit juices, such as lemons, oranges, limes, etc., have been rec-

*Read before Medical Association of the State of Alabama.

commended by some with the idea of the disease bearing some relation to scurvy, but this I think is of very little importance.

A few remarks on the following case will illustrate how quickly a case may prove fatal and how hopeless we are in the face of so dreaded a disease. I was called, in October last, to see the three-year-old child of Mr. and Mrs. H. J. White, who for the past six or eight months had lived out in a grove on a hillside in a tent, with the best hygienic surroundings possible—everything thoroughly sanitary and in good condition. The mother was healthy, and had three other healthy children, all robust and fat. The child had never had any sickness previous to this. A week prior to the development of the gangrenous ulcer, the child had a slight attack of diarrhea, which yielded to home remedies. When I first saw the child there was an ulcer about the size of a quarter, of very black and dirty appearance, on the left side of the roof of the mouth, which spread very rapidly to the left upper gum, and in twenty-four hours there was considerable swelling and brownish indurations on one side. The gums turned black, and the ulcer extended over the whole of the left side. In about forty-eight hours after I saw him there was sloughing of the mucous membrane and the deep structures—the tongue, gums and cheek—and considerable swelling externally was visible. The child was unable to take any nourishment by the mouth; temperature ranged from between 103 F. to 105 F., the pulse was very rapid and weak, diarrhea developed, stools became very frequent and of a very foul odor. The prostration was very marked, and the child presented a listless appearance and lay most of the time in a stupor. The disease involved the nose and left eye, and purpuric spots were visible all over the child's body previous to death.

The disease progressed very rapidly and terminated in death about the eighth day from the beginning of the ulcer, the child dying in convulsions. I used formaline solution, carbolic acid, bismuth subnitrate, nitric acid, chlorate potash, hydrogen dioxide, and, in fact, all the ordinary antiseptic washes commonly used. I gave internally supportive treatment, such as strychnia, iron, brandy, beef juice, etc.; I used also peptonized milk by enemas, but these were not well retained. I also gave the child an abundance of lemonade and orange juice. Sedatives were given, as necessary, to quiet the child.

Dark, syrupy extracts of corn silk are made from the dried silk and are devoid of the value inherent in the volatile principles, says the Therapeutic Digest.

OBSERVATIONS ON THE GENERAL TREATMENT OF FRACTURES.*

By Ansel G. Cook, M. D., Hartford, Conn.

The treatment of fractures during the past fifteen years has not made the rapid progress that has characterized the other branches of medicine and surgery.

No great discoveries have been made, and no particularly valuable form of apparatus has been invented. Still, fractures to-day are better understood and better treated than ever before.

The more general knowledge of asepsis has helped; the uses and limitations of the plaster of Paris bandage have been more clearly defined, and splints and appliances of all kinds are less complicated and more efficient.

Our progress—and I can honestly report progress—is due rather to what we have unlearned, than to what we have learned.

Fifteen years ago, all the text-books that I was able to consult, actively asserted or tacitly admitted that fixation of an injured joint produced ankylosis.

Hamilton was still the great authority on fractures, and Hamilton said, and said emphatically, that in fractures into the elbow joint, passive motion should be inflicted on the joint as early as the seventh day after the injury.

The courts of law accepted the doctrines of Hamilton as proper treatment, the text-books supported him, and the general practitioners of medicine inflicted the passive motion. This they did, conscientiously and industriously, first, last, and all the time.

A reaction, however, was beginning to set in. The younger men who had not felt the personal influence of Hamilton, followed less blindly than their elders. Early passive motion did not always prevent ankylosis. There were plenty of stiff joints in evidence, that had had early passive motion.

On the other hand, immobilization did not invariably produce ankylosis. Hamilton himself, with his long side splint, immobilized the uninjured knee and hip when he set a fracture of the femur, and these joints did not ankylose.

Orthopedic surgeons immobilized very seriously inflamed joints for long periods of time, and these joints frequently returned to their former usefulness.

Lastly, why should injured bones, muscles, ligaments, and tendons, when combined in the formation of a joint, be inflicted with early passive motion, when bones, muscles, ligaments, and tendons considered separately, were universally admitted to require rest and immobilization?

On May 24, 1894, I had the honor to read

* Read before Conn. State Medical Society.

a paper before this Society, on "Fixation in the Treatment of Fractures into Joints."

I did not believe in the early passive motion of fractures into joints, and I spoke against the practice.

I have never claimed any originality for my ideas, but I was the voice of a very small and feeble minority of the members of this society, and we had the books, the courts, our brother practitioners, and the laity, thoroughly drilled in the teachings of Hamilton, all against us.

I will quote from my original paper, a summary of the results of my investigations:

"No normal joint has ever been proved to be ankylosed or even inflamed by immobilization per se. If the immobilization has been performed in such a manner as to produce interarticular pressure of the bones, or the bandage so tightly applied as to interfere with the circulation, and produce sloughing or gangrene, the case can not be considered one of simple fixation.

"Fixation, though it does not cause ankylosis or inflammation, produces important changes in the tissues; muscles atrophy from disuse, bones become more porous and friable; blood vessels diminish in size and number, and in the young, the development of the limb is retarded.

"It seems probable that immobilization would diminish temporarily the supply of synovial fluid and render the membranes and tendons less pliable.

"I am inclined to this opinion, though Phelps, in examining dogs killed nearly five months after their joints had been carefully immobilized, found the synovial fluids undiminished in quantity, and the tendons, ligaments and membranes in all respects normal.

"A certain amount of motion is necessary for the growth and development of all the tissues of a healthy joint; when the joint is immobilized, the tissues atrophy and growth is retarded. When the joint is again used, no matter how long the period of immobilization may have been, the tissues regain their normal consistency.

"When the patient is young, and the period of immobilization has extended over months or years, the matter of retarded development may become a serious detriment to the future usefulness of the limb.

"Massage is useful in restoring atrophied but otherwise healthy muscles to their former usefulness, in breaking up minor adhesions, and in removing the products of inflammation by increasing the blood supply and thus hastening absorption.

CONCLUSION AND RULES OF TREATMENT.

First. "That bony or serious fibrous ankylosis is the result of injury and subsequent inflammation and not of immobilization."

Second. "That early passive motion only disarranges the fragments of bone, thereby

increasing the production of callous; that it irritates the injured ligaments, and by increasing the inflammation tends to produce the ankylosis it is thought to prevent."

Third. "Immobilization is useful only when active inflammation is present, or until the ruptured ligaments and broken bones have thoroughly united."

Fourth. "The logical treatment of a fracture into a joint, therefore, should be rest and local applications to reduce inflammation. Reduction of the fracture as early as possible, then immobilization until the bones and ligaments have united—from three to eight weeks, or more.

Fifth and lastly. "Passive motion, massage and use till the tissues become normal, or, if the massage fails, complete rupture of all adhesions under an anesthetic. The factors which will ultimately determine ankylosis are the nature of the original injury, the character and duration of the subsequent inflammation, the destruction of bone and cartilage, cicatricial contraction of the soft tissues around the joint, and the age and condition of the patient."

This paper was written twelve years ago. I am still of the same opinion, and have nothing to add or subtract, but when I first presented this subject for your consideration, it did me more harm than anything I had ever done in my life.

I was called irrational, and unfit to be allowed to treat fractures.

My old friend, Dr. Melancthon Storrs, labored with me in private and denounced me in public, and finally threatened that if I continued my practice of neglecting to make early passive motion in the fractured elbows I attended, the profession would not uphold me, and I would probably lose my place in this society.

To-day I again read this paper, but without fear, for now I am of the majority, and the later text-books uphold my position.

Scudder says, regarding fractures into the elbow joint: "Passive motion should be instituted late rather than early. In most instances it will be wise to delay passive motion until union is firm—from the fourth to the sixth week. It should be of the gentlest sort; passive motion that is painful does harm."

Nobody will criticise this paper unless they say I am wasting valuable time telling you something you already know. My excuse is that it is sometimes well to review the past, and that there are still living some believers in early passive motion who are as yet unconvinced.

And then gentlemen, after all I have suffered and endured, after all you have said about me and against me, you will perhaps forgive an old man if he says—"I told you so."

INSANE INDIANS.*

By John F. Turner, M. D., Canton, S. D.

Insanity among Indians has, for years past, been a source of much anxiety to other Indians and to officials in charge of them. We often hear it remarked, and it is true, that the problem of maintaining, educating and civilizing the Indians of our country is a most difficult one.

During recent years, a great deal has been done and in the future a great deal more will be done for these people, who are ever prone to look backward and mourn over fancied or real misfortunes rather than to look forward hopefully to the future and its possibilities.

The old-time ration system, which stimulates laziness, carelessness and dependence, is fast passing into oblivion and in its stead work for all able-bodied men is provided with a reasonable compensation, which will stimulate independence, a hope for the future, and make a more strenuous people of them.

Formerly some insane Indians were cared for at the government asylum at Washington City; others at private or State institutions, but a number of them roamed at will on the reservations among other Indians, who, on account of their superstition, feared and neglected them.

In the light of our present civilization, the construction of an institution for the care of insane and helpless Indians is, to my mind, a most humane and noble act on the part of our government, and my hope is that this institution may become adequate for the needs of all these unfortunate people. We now have fifty-two insane Indians at the Indian Insane Asylum at Canton, S. D., thirty-two males and twenty females, 65 per cent. of whom are full blood and 35 per cent. half breed Indians.

Some of these cases are rare and all have well marked symptoms indicative of each individual malady.

One male is afflicted with angina pectoris hysteric; one female with cretinism, sporadic; two males with dementia, epileptic chronic; three males and three females with dementia senile; one female with dementia syphilitic; four males and two females with dementia chronic; one female with dementia terminal; one male with diplegia spastica infantilis; one male with dipsomania; two males with epilepsy grand mal; one female with epilepsy petit mal; one female with epilepsy syphilitic; five males and three females with imbecility congenital; one male and one female with insanity, circular; one female with kleptomania; one male with mania acute; one female with mania periodic; two males with melancholia, acute;

three males with melancholia, chronic; one female with melancholia, hypochondriacal; one male and one female with melancholia, delusional; one male with deaf mutism, and one female with nymphomania.

I wish to refer to a few of the most interesting of these cases.

Myxoedema is defined by Mayer as a constitutional affection due to the loss of function of the thyroid gland. Three forms of this disease are recognized, viz.: The congenital form, myxoedema proper and operative myxoedema.

Sporadic cretinism, or the congenital form of myxoedema, is very rare. According to the American Journal of Medical Sciences, November, 1903, there were but eleven or twelve cases of this disease in this country.

The case I had under treatment is the only one I have seen among the Indians during thirteen years' experience. This case is a female sixteen years of age, thirty-six inches in height and weighs forty-three and one-half pounds. She is idiotic, has myxoedematous skin, a pug nose, thick everted lips, thick tongue, which protrudes from the mouth during sleep, umbilical hernia, short plump neck and absence of hair growth. Dentition was delayed about ten years. Speech is impossible and she walks with difficulty.

The most common causes of this condition are exposure to cold, syphilis, traumata and heredity. Thyroid treatment promises good results in this disease.

Angina pectoris hysteric, or pseudo angina, differs from the true form in that we do not have the arterio sclerosis; it is never fatal, occurs earlier in life and can always be traced to a psychogenic origin.

The anamnesis of the case I wish to cite can better be understood by my quoting a part of the clinical history, dated January 30, 1904, sent me by his attending physician, which is as follows:

"A Menominee Indian, age twenty-four years, insane. He has the history of having received a sunstroke about five years ago and since has had attacks of unconsciousness from one to four a year, each attack lasting from a few hours to two days; these attacks growing in frequency, severity and length until about a year ago he came under the care of a physician. He was treated in the hospital for a week, then discharged, able to go about his work again. Then, about a month later, he got off again and was placed in the hospital for about two weeks. This time he was quite violent. He was apparently well for about four months, and since then he has had five attacks more violent than before. Previous to one of his pronounced attacks, he enters a state of melancholy for four or five days and eats scarcely anything. These attacks begin with tonic convulsions of upper extremities, and as

*Read before S. D. State Medical Association.

these spasms cease, he passes into a state of maniacal excitement and become very violent, dangerous both to himself and others. He is a man of good habits, physically strong and perfectly docile except when he has these periodical attacks. Hoping the above history may be of some benefit in making a diagnosis and that he may make a complete recovery, which I think he probably will, I remain, etc."

This young man was admitted to the asylum at Canton February 2, 1904. He had a severe attack February 14, 1904, at which time it was necessary to restrain him to prevent injury to himself. He was melancholy and ate nothing for a few days previous to the attack. The pain came on suddenly in left side, radiating to left shoulder; he had syncope and cried in a loud voice and struck the wall or any object in his way and incoherently related how he had been persecuted.

I diagnosed his disease angina pectoris hysteric and gave him hyoscine to quiet him, stimulated his emunctories and gave him tinct. nux vomica, liquor potass. ars. and syrup hypophosphites continuously. On April 14, 1904, he had a slight attack, but since that date he has had no return of his trouble. He was discharged from the asylum June 5, 1905.

I have had under treatment for two years a Navajo boy, ten years of age, who has diplegia spastica infantilis, with contracture of the four extremities; both hemispheres are diseased. His history indicates that difficult delivery through a narrow pelvis and possibly an unskilled accoucheur evoked meningeal hemorrhage over motor zone, which caused lesions of the cortex. He also has aphasia and a general spastic condition, athetosis and chorea of all four extremities; epilepsy has not appeared. His mind is bright. This condition, when well established, shows little tendency toward recovery.

I have treated this case with antispasmodics and tonics and devised an oaken frame with a horizontal beam, from which he is suspended by spiral springs at the shoulders of a tightly laced jacket. This is used for an hour three times each day and allows the limbs to assume a dependent position, which has overcome the contracture to a considerable extent.

Another case, that of a seventeen-year-old girl, with infantile spastic hemiplegia of right side, which is of a permanent nature, was admitted to the asylum one year ago. In this case growth was arrested in the extremities of the affected side early in life; she has had epilepsy since childhood, is idiotic and the characteristic habitual subluxation of the lower jaw occurs. The hand and fingers are more affected than the lower

extremity, the wrist being almost doubled upon itself.

At this late stage of the disease our knowledge of the initial lesion is not definite. We know that a meningeal or cerebral hemorrhage, thrombosis or embolism, with resultant inflammation and disorder of the motor centers or any cause producing atrophy of the hemispheres, will cause this disease. An operation on any part of the body or an extensive burn which causes the loss of a considerable amount of blood serum will usually arrest the epileptic seizures for a time, but cerebral surgery has not generally proven curative in these conditions.

It is an old saying that a man is as old as his arteries. It is very rare, indeed, that we find at the autopsy table healthy vessels in the hereditary weakling.

In this connection, I wish to refer to a case under my care. —, a Pima, sixty-five years of age, admitted two years ago with advanced arterio sclerosis, pulse weak and slow; he had obstipation, anasarca, and weighed one hundred and fifty pounds. The contour of his head is that of a degenerate. This man undoubtedly inherited non-resisting nerve cells and unstable blood vessels, and, on the occasion of his wife's death, delusions and hallucinations appeared which rendered him dangerous to other persons.

After relieving this man's dropsy by a combination of potass. bitartras, potass. et sodii tartras and digitalis, he weighed only one hundred pounds, and his mental condition was much improved. I then put him on cascara sagrada and nux vomica, and he now weighs one hundred and forty pounds, has no dropsy and is active and comfortable.

Physical and mental exercise in the open air as adapted to each case, followed by the bath at the proper temperature, is productive of much more good in the treatment of insane people than sedatives and the various forms of restraint much in use.

Our gardens are large and well kept; they supply an abundance of vegetables for the patients, from which they derive great benefit. On every suitable day during the summer season, I encourage those of the male patients, who need the treatment, to work in the gardens at hoeing, weeding or gathering and preparing vegetables for cooking. This they do willingly, with the help of an attendant, and as a result they eat more, sleep better and their mental and physical condition is much improved.

Stuver has used galvanic electricity with splendid results in chronic rheumatism. He uses a current of from 5 to 20 mp. for a person, 20 minutes to a half-hour and says that the results are better if a thin layer of cotton, wet with a solution of cocaine, is placed under the positive pole.

THE NEW ALBANY MEDICAL HERALD.

AUGUST, 1907.

Old Series Vol. XXV, No. 320. New Series Vol. XIV, No. 191

GEO. HANLON DAY, M. D., Editor.

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ENTERED AT P. O., NEW ALBANY, IND., AS SECOND-CLASS MATTER

EDITORIAL.

A CHECK ON THE DOORSTEP MEDICINE VENDER.

The Illinois State Board of Health has time and again tried to point out the danger which has resulted from sample medicines being thrown upon doorsteps by the medicine vender. They have cited cases wherein death has resulted by children opening these packages and eating the contents. They have given the composition of quite a number which we found upon a porch or doorstep, and also published the names of the poisonous ingredients. They did their part to protect life and further the interests of the people, and repeatedly asked that a law be enacted to regulate free sample peddling. To call attention of this to the city authorities and the public they deemed a duty, and yet to do so as frequently as they have done required considerable amount of perseverance, but all is well that ends well.

Such an ordinance has been passed by the Indianapolis City Council, and we are well pleased to know that our city lawmakers have done their duty."

The above is culled from the November issue of the Central States Medical Monitor, sent to us by our friend Dr. Samuel E. Earp, editor.

The ordinance makes it unlawful for any person, firm or corporation to distribute, or dispense from house to house, or to persons within the limits of said city, any article, substance or compound, patented or otherwise, to be used as a drug, remedy or medicine, without first submitting to the department of public health and charities of said city a sample of said article, substance or compound, together with a written or printed name and formula therefor, and obtaining from the city controller a license authorizing such distribution, which said license shall be issued only upon presentation of an application therefor properly signed and approved by said department of public health and charities.

In the interest of the lives and health of the people, every city and village in the State should pass an ordinance similar in character. Much harm has been done by the distribution of samples of medicine, and the harm which has resulted from the dispensing of medicines by ignorant or unscrupulous house to house or public place vendors, is incalculable. It must be remembered in this connection that a municipality has neither a legal nor a moral right to authorize the sale of medicines from house to house, or in public places, unless the vendor holds a license from the State Board of Health.

Not only should ordinances be adopted prohibiting the sale or distribution of medicines from house to house, but the cluttering up of yards, steps and halls with hand-bills and circulars should be put under the ban. Special consideration should be given to the literature so widely distributed by unscrupulous concerns, which may have demoralizing effect upon children of both sexes, and especially boys.

RINGWORM.

This is a very common disease, and has been studied so carefully and completely that we know all about its cause, course and symptoms. The great trouble is the treatment; the multitude of remedies which have been suggested for it, and the number which are in daily use, show conclusively that the profession have not found one which can be relied upon to cure all cases promptly. This subject will be taken up later on.

The cause of ringworm is a fungus, a mould, resembling in all essential features

the moulds which we see growing upon moist animal and vegetable matters. It consists principally of fine threads, some of which split up into spores when the plant is mature. There are several different varieties of these moulds which cause the various kinds of ringworm. One class which bear small spores are the cause of the great majority of the cases of ringworm in children. The disease in adults is usually produced by one of the large spored ringworms.

Another cause of variation in the clinical appearances of the disease is the fact that the skin is tougher and more resistant on some parts of the body than on others, and the skin of one person than that of another.

As a general rule we may say that the thinner and more delicate the skin the more evident will be the signs of inflammation. Thus on a child's cheek the disease forms a circle of raised papules on an angry red base; there is some scaliness and often considerable "weeping" on the surface. On the back and on the outsides of the arms and legs the eruption is never so violent, but on the armpits, the insides of the thighs and the scrotum, where the skin is tender, the disease presents typical symptoms.

Ringworm of the palm of the hand and sole of the foot is quite rare, except in small children. The scalp is the worst region of all, for it is there that the disease is most prevalent and is also by far the most difficult to cure. The appearance, also, is different, for the skin of the scalp is the most resistant of all to irritating agents, and a disease which produces an acute inflammation on other parts of the body will barely cause a dry scaliness of the scalp.

Ringworm is largely an affection of the hairs and hair follicles, although the epidermis of the skin is also invaded. Some varieties of the fungus are found principally in the hair sheath, that is, surrounding the root of the hair. This can often be shown by pulling out a diseased hair, when the mould will adhere as a white envelope about its base. It can be readily demonstrated by soaking the hair in liquor potassae and examining it under a microscope.

The mould causes the hair to become brittle, and it breaks off close to the scalp. This causes the infected area to appear bald, but the stumps of the hairs can always be seen upon close examination. With the large spored varieties of the fungus the hairs are said to break off much closer than when the small spored fungi are concerned. The spots on the scalp are then often quite smooth, and are even smooth to the touch. This makes a difficulty in diagnosis, for these spots greatly resemble those produced by alopecia areata, a very different affection. By the aid of a glass, however, the black ends of the hairs can be seen within the mouths of the hair follicles.

As the name implies, ringworm usually occurs in more or less circular spots. Two or more of these circles may join, forming a large gyrate line; some time there are concentric rings, a new invasion following an older one.

On the scalp the ring form is not so typical, except on the tender skin of very young children. The disease occurs in spots, sometimes only one, but usually many. The brushing and combing of the hair tends to spread the spores of the disease to all parts of the scalp, there may even be a general infection of this region.

As mentioned before, the appearance on the scalp is that of a dry, scaly patch; this is difficult to distinguish from psoriasis. If there are spots of psoriasis on the elbows and wrists and no ringworm anywhere on the body the chances are that the scalp lesion is also psoriasis. For another thing, psoriasis does not cause the hair to break off short and leave the characteristic stubble of ringworm.

Seborrhoea of the scalp causes dry dandruff in most instances, or a general greasy scaliness. There is also frequently a thinning of the hair; but the hair comes out from the root; it does not break off. This disease rarely occurs in patches. In the patches caused by alopecia areata the hair is completely gone, the same is true of syphilitic alopecia.

In some instances the ringworm causes a formation of pus, as in sycosis, or ringworm of the beard. The inflammatory process may extend to the tissues between the hair follicles, causing a raised, boggy patch, looking like a mild carbuncle, and for which it is frequently mistaken. This formation is called kerion; it is of little use to lance it in ordinary cases, for there is rarely a pocket of pus beneath.

The cure of ringworm on the body is usually a very simple matter; almost any antiseptic, if well rubbed in, or even painted on the patch persistently, will kill it. One of the commonest remedies is the tincture of iodine. An ointment of ammoniated mercury will do, and in persistent cases echol often gives quicker results than any other drug.

When the disease invades the scalp, however, the physician's trouble begins in earnest. It is the practice of many young doctors to show the parents an article on ringworm from a standard text book, so that they may not expect a cure in less than six months of constant treatment.

The hair must be clipped as close as possible, and shaving is better. All the stumps of the hairs in the affected area must be pulled out, a few each day. The patch and about an inch all around it must be treated with some antiseptic salve twice a day; it must be rubbed in thoroughly. All the hair

must be kept short and the scalp washed with an antiseptic soap to avoid the spread of the disease. It should be dried without rubbing for the same reason.

As for medicaments, the best is ecthol, for it penetrates well, and is sufficiently antiseptic. Some use the bichloride or the oleate or the yellow oxide of mercury; these are made into ointments with lanoline and olive oil. The great thing, however, is patient and persistent work, vigorously attacking any new patches which may present themselves.

NOISES IN CITIES.

Prof. Edw. S. Morse, of Salem, Mass., in an interesting and instructive article in *Modern Medicine* of May, 1907, on "The steam whistle a menace to public health," says that it has been shown by expert medical testimony that the steam whistle is positively injurious to health. He says further, that since many of the largest manufacturing establishments in the country carry on their work without the use of the whistle, and many of the largest freight yards in the country have abandoned its use, and thirty towns and cities of Massachusetts, and a number of cities elsewhere, as Detroit, Cleveland and Atlanta, have stopped the use of the whistle within corporate limits, we are justified in claiming that its use is not necessary and should be abated in all cities, towns and villages.

At Lowell, Mass., are ten large corporations that employ 18,000 persons. These corporations do not use the steam whistle. Neither does the great Warren Paper Mills at Portland, Maine, although employing between 1,300 and 1,400 men, divided in three shifts a day. The Pope Manufacturing Company employs 1,000 or more, and the Natural Food Company, Niagara Falls, a large number, and yet do not use the whistle. On the other hand, a file factory, employing one man and two boys, blows a whistle "that not only disturbs the entire neighborhood, but wakes up invalids in the next county."

He adds that in European countries the use of the whistle, even where trains at high speed cross roads at grade, is forbidden.

The city of Cleveland, Ohio, forbids the blowing of whistles by railroad engines, except when it is necessary to apply the brakes in time of danger; and by steam vessels, except as a danger signal, or under circumstances prescribed by the rules of navigation, or the laws and regulations of the United States requires the use; also stationary engines, except in case of fire or collision, or other imminent danger.

Detroit, Mich., has similar regulations. It costs an offender \$50 or imprisonment for thirty days to blow a locomotive whistle

within the city limits of Atlanta, Ga.; and the same is true of Newcastle, Penn.

A verdict of \$61,000.60 damages was given by the jury in a case against the Boston Elevated in a suit brought by the Columbia Theater, on the ground that the noise of the trains ruined the theater.

The use of the steam whistle depresses the value of abutting and near-by property and prevents building, or occupying premises already built.

As to the medical side, the following may be stated: The blowing of the steam whistle works a detriment and misery to thousands of invalids, the sick, the dying, the nervous and overworked; is one cause of nervous prostration, which is a disease of cities. Not only does the noise irritate the auditory apparatus but harms the brain and nervous system. The noise is a menace to public comfort, sleep and health. The sick and convalescent are injured. One has no more right to throw noises into a house than to throw stones. A certain quantity of nerve energy is required to resist noises, and when these are abnormally great they make a great drain on the nervous system.

In thousands of cases persons are being made ill, are committing slow suicide, or are being slowly and painfully killed by useless noises.

Political posters were found on the walls of the buried city Pompeii in which the main plank for the candidate's platform was the suppression of street noises.

Carlyle says: "That which the world tortures me in most is the awful confusion of noise. It is the devil's own infernal din all the blessed day long, confounding God's work and His creatures. A truly awful, hell-like combination, and the worst of it is a railway whistle like the screech of 10,000 cats, and every cat of them all as big as a cathedral."

There are comparatively few factories in this district, and therefore the people of this city are not much troubled with the whistling of stationary engines. At the same time we believe that the experience elsewhere has demonstrated that the use of the whistle to call employes to work or to cease therefrom is entirely unnecessary, and should therefore be stopped. The experience elsewhere would seem also to establish the fact that the use of the locomotive whistle in this district is unnecessary, and unless absolutely required by law or municipal regulations, should also be stopped. The use of the steam whistle on boats does not appear to be open to so much objection. But the practice of inaugurating some holidays and festivities by the promiscuous blowing of all the whistles in and about a city, sometimes at the dead of night, is without sense or justification.

There is another form of noise that, per-

haps, is even worse than the steam whistle, namely, that from exploding firearms and fireworks; worse because of the nature, so sudden and unexpected and intensely penetrating. Although the use of fireworks is restricted theoretically to what we call Independence Day, as a matter of fact for some time before that day there are many sporadic cases. Every physician is well aware how much distress is caused by this noise. The municipal authorities undertake to limit the noise near hospitals and residences of the sick, but with only partial success. There is little, if any, patriotism in the custom; as practiced, it is mostly the outcome of the natural bent of an undeveloped nature—the growing boy and the half-developed man, who delight in nothing so much as noise. We think that this form of noise could be and should be stopped.

DERANGED UTERINE FUNCTION.

By James A. Black, M. D., Morganza, Pa.

It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine function, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition and absolutely refuse to submit to an examination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs exists. A very limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners no remedy or combination of remedies hitherto in general use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety

of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern therapeutics. In the treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar, in the following particulars:

1. It is prompt and certain in its action.
2. It is not nauseating, and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

The following clinical notes will afford a general idea of its action in a variety of cases:

Case 1. Mrs. ——— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumbar region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith) with some misgiving owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day, during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so and, following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period—lasting five days—there had been practically no pain, and the amount of flow was, as far as she could judge, normal.

Case 2. Miss ———, aged thirty, has been a sufferer for years with dysmenorrhea. For about three years she had suffered with leucorrhea, particularly annoying after each menstrual period. She had undergone treatment at different times for the leucorrhea and dysmenorrhea, but had never experienced permanent benefit. She had been obliged to spend the couple of days of each period in bed. She consulted me about one week before her period. Exam-

ination revealed a purulent discharge oozing from os cervix and a rather large uterus. There was no displacement. She was put upon Ergoapiol (Smith), one capsule three times a day. The onset occurred one day earlier than expected and was attended with considerable pain. The patient was, however, able to attend to her usual duties, a state of affairs such as had not been experienced for some years. At the onset of the flow Ergoapiol (Smith) was administered, one capsule every two hours. The effect was astonishing. In eight hours the pains had well-nigh subsided and there was practically no discomfort, except some pain in back.

Case 3. Miss ———, aged twenty-one, had suffered for two years with irregular and painful menstruation. She had commenced to menstruate when sixteen, menses being very scanty, but regular and accompanied with but slight degree of suffering. She was never of a very robust physique, but in the main healthy. When about nineteen, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately, she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward was called upon to afford relief. Flow was very scanty and clotted. There were sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours. Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman has been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses, and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporter will doubtless work considerable benefit in her case, but it can not be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, were due entirely to Ergoapiol.

Case 4. Miss ———, aged eighteen, had always been regular in menstruating. She could get no history of any previous disorder within patient's knowledge. She contracted a heavy cold about the time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. She

reported later that flow was established in twenty-four hours after treatment was commenced. The delay in this case was about four days.

Case 5. Mrs. ——— consulted me, giving the following history: Three months previously she had a profuse uterine hemorrhage occurring about the time of menstrual period. As she had for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting, and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains of a cramp-like nature. The discharge began to grow less in about four days and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant. Her condition locally and generally has since steadily improved.

ABSTRACTS AND SELECTIONS.

IS MENSTRUATION PHYSIOLOGICAL OR PATHOLOGICAL.

Tobler (British Medical Journal) has during the past two years examined women, with a view to ascertain as precisely as possible the influence of the catamenia on the female economy. As is the case with most previous observers, Tobler finds that in the great majority of women at the present day menstruation is associated with distinct deterioration of the general health and diminution of functional energy. In 26 per cent. local pain, general malaise, and psychoses coexist; in larger proportions come those in whom general weak health, or else some psychosis or local pain, is alone experienced at the period. In sixteen per cent. none of these symptoms are present, and Tobler makes a separate group of 3.3 per cent. in

whom the mind and function are stronger during the period. In about 3.6 per cent., constituting yet another class, this increase of strength during the presence of the catamenia is associated with distinct disturbances in the intervals. He considers that the familiar disturbances during menstruation are pathological, but that the process itself is physiological. Deterioration of constitution and unhealthy habits and surroundings cause the increase of tissue change, which is part of the process, to result in toxic products prejudicial to the system, whilst normally products favorable to the economy should be evolved.

THE TREATMENT OF INOPERABLE MALIGNANT TUMORS—CARCINOMA.

J. M. G. Carter, M. D., in the *Illinois Med. Jour.*: Lauder Brunton was the first to investigate the chemical composition of cell-nuclei from which has been secured a compound called nuclein. This substance is an albuminoid and contains phosphorus. Nuclein is the most distinctive element of leucocytes, being the constituent by virtue of which the cell grows (E. R. Larned). Vaughn and McClintock have demonstrated that the nuclein is the germicidal agent in blood plasma and is furnished by the polynuclear leucocytes.

The bromide of gold and arsenic is another remedy which, in my hands, has seemed to prove useful in the treatment of inoperable carcinoma; but I have always used it in connection with other agents. I have had more confidence in the nuclein than in the bromide, chiefly, perhaps, because I have had two cures in which I did not use the bromide, while I have had none where nuclein was not used. I have come to consider the administration of nuclein and the bromide of gold and arsenic together as a most rational and valuable treatment in cases of inoperable carcinoma. It is the combination upon which I depend rather than on either agent singly.

Mrs. S., aged 50. She had suffered no serious illness prior to the beginning of her present ailment, about one year before my first visit. Her first symptoms were indigestion, flatulence, heartburn, eructation of gas and similar disturbances of the stomach. The symptoms had gradually grown worse until pain and vomiting had supervened some weeks before. She had lost flesh and grown weak. At the time of my first visit, the patient was lying on a couch, in pain, pale and cachectic. She had been vomiting and apparently had suffered much. The ejecta having been destroyed, no opportunity offered to analyze the vomited material at that time. The temperature was normal. Temporizing treatment was adopted

and the patient was not seen again for a week. Then I was summoned hastily to see her and found her vomiting and in great pain. She had not been free from these symptoms since my former visit. This time, following my directions, the vomited material had been reserved for examination. The patient had not improved. The ejecta were typical and abundant and contained dark grumous material, mucus and remnants of food. The occurrences of vomiting were periodical. A distinct tumor could be outlined at or near the pylorus. The bowel evacuations also contained a dark material. Chemical examination showed increase of lactic and absence of hydrochloric acid. The microscope showed cell-nests and bacteria. Diagnosis, carcinoma of the stomach.

Treatment.—The local treatment consisted of the use, by mouth, of a 2 per cent. solution of Hydrozone. The patient was told to drink half a pint of this solution half an hour before meal-time, lie on the back for five minutes, then turn on the right side and remain in that position for 25 minutes. This remedy was given for its antiseptic effect. The internal treatment was nuclein. The particular preparation was Reed and Carnrick's protonuclein. The dose was 24 grains a day. This time the patient was kept under observation for a month, until the symptoms were not quite so severe. The treatment was continued, however, and after several weeks I called to see the patient in another exacerbation of her symptoms; but this time they were not so severe. After a few days I dismissed her again, with advice to continue the nuclein, but to omit the Hydrozone. Some five months later I called to see the patient and found her at work about the house. The symptoms and tumor had disappeared and the cachectic look had given place to a more healthful appearance. I did not see her again, but three years later I was informed that she was well and had no return of the old symptoms.

NUN'S MURMUR.

Wiedemann (v. Leuthold-Festschrift) abstr. in *Berl. klin. Wochenscher*: A murmur heard over the jugular veins is generally considered pathognomonic for anemia. Wiedemann, however, states that it frequently occurs in perfectly normal individuals. In 300 healthy young men, from 17 to 30 years old, a nun's murmur was found in 80 per cent., with the head turned to one side, and in 69.3 per cent. with the head straight. It is more frequently heard on the right side than on the left, and occasionally occurs with the head straight, though absent when the latter is turned. The hemoglobin was determined in 85 men. Of these, 78 had 90 per cent. hemoglobin or over, while

of these a venous murmur was audible in 73. Several men, with unusually loud murmurs showed no sign of anemia. These results coincide with those previously obtained by Weil and Apetz, and should give the quietus to the belief in the significance of nun's murmur for the diagnosis of anemia and chlorosis.

FUNCTIONAL HEART DISEASES.

Functional disturbances of the heart's action may come from several causes and combinations of causes. They are very common in connection with diseases of the valves, but even when there are no discernible lesions the heart may beat in some very abnormal fashions.

These troubles are dependent upon the state of the heart muscle, of the nerve ganglia and nerve fibers within the heart, the nervous influence from the cerebro-spinal and sympathetic systems, and upon pressure from within or without the organ.

The heart's action may be abnormally fast and at the same time either very strong or very feeble. An extremely slow heart may also vary greatly from the normal in the force of its beat.

As the work of the heart is controlled by the nervous system we must study these abnormalities in connection with diseased states in other parts of the body, being especially mindful of nervous disorders.

In nearly all cases the trouble demands a drug which is a tonic and at the same time sedative; one which acts soothingly upon the nerves and also strengthens the heart muscle. The following cases are quoted because the drug which was used, Cactina, met these indications in a very satisfactory manner.

Marr's reports three interesting cases as follows:

On June 6, 1906, I was called to see Mrs. Artie M., who was suffering from a heart neurosis. The heart's action was very rapid and feeble. There was a fluttering of the heart and great disturbance of the circulation on the least exertion. I enjoined rest in the bed for a few days and ordered Cactina pillets. Patient made a prompt recovery.

About the same time I was consulted in regard to the case of Harry G., a young man who was recovering from a spell of fever. He was still weak and thin from his recent illness and the cardiac muscle lacking in tone. He complained of smothering sensations when he walked about. At times he became quite faint. He had taken digitalis without any apparent benefit. I gave him nux vomica and dilute nitro hydrochloric acid as a general tonic and Cactina pillets for his heart. He recovered very rapidly under this treatment.

Miss Myrtle G., a school teacher, came to me, complaining of overaction of her heart and disturbances of the circulation. I found her anemic and constipated. I gave her treatment for this and Cactina pillets to tone up the heart. She made a good recovery and is so pleased with the pillets that she wants a few to have at hand should she be troubled again.

MEDICAL GLEANINGS.

"The place to study pathology is in the living subject at the operating table."

Lebon discovered illuminating gas, but was refused credence because it was believed no lamp could burn without a wick.

In cerebral congestion, Dr. Hamilton gives at night one or two pills containing four grains each of blue mass, extract of colocynth and fel bovis.

Doctor John V. Shoemaker, in a recent lecture, asserted that a 10 per cent. ointment of oleate of mercury applied twice a day would speedily destroy trichophyton of tinea sycosis and restore the patient.

Every hospital should be a clinical school for medicine and surgery. The present medical school as usually understood is poorly prepared to teach laboratory work leading up to these subjects, to say nothing of the subject themselves.

The Disinfection of Schoolrooms.—The necessity for safeguarding school children from diseases likely to be contracted during school hours (Bull. N. Y. State Dept. of Health) is receiving a good deal of attention at the present time. The principle of medical inspection of school children is widely admitted and practiced, and more and more stress is being laid on the necessity of adequate air space and proper ventilation. As a rule, however, the advantages to be obtained from the systematic use of disinfectants do not seem to be appreciated. If any of the school apparatus is used in common by the children, such apparatus should be sterilized at the end of each day. Desks and floors should be treated with disinfectant solution daily. When the floors are scrubbed, a little disinfectant that will not be affected by soap should be added to the water.

The plague in India still continues to ravage the country, as it has done now for over 10 years. The total deaths for the period from October, 1896, to December, 1906, number 4,411,760. It has been established that practically the only disseminators of the plague are the rats and rat fleas. The natives, unfortunately, instead of co-operating with the authorities in trying to exterminate

ate the rats, feed the rodents and allow them to propagate freely. The native population is also opposed to inoculation—the only safe protection against the ravages of the disease.

Horse meat dealers are enjoying a large patronage in Belgium. A horse's head perched in front of the shop, indicates the kind of meat sold, as it is rare for a dealer to handle both beef and horse flesh. Contrary to the general opinion, it is not the horses that are no longer ~~in~~ for service of any kind, that are slaughtered for food purposes, but even colts and young horses. Rigid inspection of the carcasses is carried out before the meat may be put up for sale. The meat is sold at a little more than half the price of beef, and is said by "horse fanciers" to be very palatable. About 2,000 head were slaughtered in 1905.

The following conclusions are quoted from the *Lancet* by the Medical Review of Reviews. W. H. B. Stoddart says: (1) That in mania an irritating product is formed within the cortical neurons; (2) that in melancholia a paralyzing product is formed within the cortical neurons; (3) that in agitated melancholia there is a combination of deleterious influences, viz., a paralyzing product within cortical neurons, and also an irritating body in the plasma which bathe the nerve cell; (4) that in a few cases of mania there is both an irritating body within the nerve cell and in the plasma bathing it.

In melancholia there is a general tendency on the part of the organism to fail in the excretion of their normal metabolic-products. There may thus be a deficient elimination of normal substances, or a new formation of cytotoxins.

A blend of harmonizing drugs has been fulfilled in Sanmetto—its ingredients harmonize, forming a most perfect blend of the santal and saw palmetto with soothing demulcents and well chosen aromatics, resulting in a soothing, healing and restorative remedy for the diseased genito-urinary economy, at once efficient, and adapted alone or in combination with other drugs.

WHAT IS THE MORAL OF THIS INCIDENT?

Dr. X enjoys the largest general practice uptown. His large automobile is always on the go. He paid me a visit this afternoon. He was in the neighborhood, he said, and he thought he would drop in and make the acquaintance of the editor of the "brightest and most interesting medical journal published." He evinced some interest in the environment of the C. & G. office. He noticed a large number—over two hundred—of different journals of the current year, neatly arranged in piles. "You read all of

them?" "Yes." "Where do you get the time?" "You can get the time for anything, if you really want to." "Well, I can't. All I read is the J. A. M. A. and the Critic and Guide. I think they are the best journals published. And you and Dr. Simmons deserve a great deal of credit for the work you are doing with reference to patent medicines and proprietary nostrums. Great work. Time the physician's eyes were opened." Here he coughed and continued: "Would you please let me have a swallow of water. I have a little cold." The office boy brought a glass of water. Dr. X took out a tablet from a box in his vest-pocket and swallowed it, washing it down with the water. The tablet was an antikamnia and codeine tablet. I said nothing.

A life subscription to the reader who will point out the best moral of this incident.—From the Critic and Guide, May, 1907.

THE MORAL.

On page 8 of the January, 1907, Critic and Guide, appears the following editorial with which, no doubt, Dr. X fully agrees:

"When a patient comes to consult me and pays me a fee, then my sole sacred duty is towards that patient and towards nobody else. And I am going to use on him and prescribe for him whatever I consider most useful for him, regardless of all other considerations. Whether the preparation is trade-marked or not, whether it has a fanciful name or not, whether it has a circular around the bottle or not, whether the druggist makes 50 or only 5 per cent. profit on it—for all of these things the patient does not care a picayune; and neither do I."

In the treatment of the chronic skin inflammations, following in the wake of attacks of toxic dermatitis, attention to the general condition of the health, avoidance of anything irritating to the skin, a carefully selected diet and proper care of the skin are important features which must not be neglected. In addition, Battle's preparation of *echinacea augustifolia* and *thuja occidentalis*, which goes under the trade name of *Ecthol*, should be used both locally and internally, a drachm should be taken four times a day.—*American Journal Dermatology*.

Sal Hepatica has been found specially serviceable as a safe laxative and eliminant of irritating toxins resulting from fermentation or decomposition of food, in inflammatory conditions of the bowels, affording prompt relief in stomacic or intestinal indigestion, colic, acute or summer diarrhea of either adults or children. It is remarkably free from any griping tendency, owing to its antacid and soothing properties.

Bristol-Myers Co., 277 Greene Ave., Brooklyn, N. Y., the manufacturers, offer to send liberal samples to physicians upon request.

THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 321.
New Series Vol. XIV, No. 192.

New Albany, Ind., September, 1907.

\$1.00 PER ANNUM
SINGLE COPIES, 20 Cts.

ARTICLES.

SUBACUTE INTESTINAL OBSTRUCTION.*

By W. M. Spear, M. D., Rockland, Me.

In presenting this paper I do not expect to make a valuable contribution to the literature on this subject, but rather to draw the attention of the profession to the absolute necessity for early diagnosis and operation in this condition. The case which forms the basis of this paper presented to me some unusual and very interesting symptoms. Previous to the operation, several physicians saw the patient in consultation and all were agreed that the condition was not due to a malignant growth. The operation was performed by Dr. J. C. Munro, of Boston, and to him I am much indebted for the use of his notes, upon which I have drawn largely in the following report of the case.

Female, married, age 41 years. I was first called to see her on September 24, 1901.

Family History.—One cousin died from cancer of the stomach.

Personal History.—When young, had an attack of peritonitis, but with one other exception had been unusually healthy up to the present time. Fifteen years ago, had a severe attack of inflammation of the bowels while four or five months pregnant. Remained in bed eight weeks. Did not miscarry, and at full term a small but healthy child was born. No bowel trouble since. At varying intervals during the last two years has had considerable pain in the abdomen, which was ascribed to food, but to no particular kind. The attacks of pain have not been associated with menstruation, which has been regular up to the present time. During the past year, the attacks of pain have become more frequent, sometimes occurring as often as once or twice a week. Has been constipated all summer for from four to seven days at a time.

On September 22d, complained that her clothes hurt her and that there was some

soreness and pain in the abdomen which was gradually growing worse. Within several days became constipated and the pain and soreness largely disappeared. Did not have a stool for one week and then a large evacuation occurred. Was free until October 9th, when the same thing was repeated. She then remained free from all symptoms until November 4th, on which date the last attack began with extreme constipation, followed by severe pain in the abdomen, which gradually diminished until it entirely disappeared. Temperature and pulse normal. Given everything in the shape of cathartics except straight croton oil, also used enemas of all kinds. This continued for about a month, and during all the time she passed gas but only a cupful of feces. Tongue clean throughout. No headache, no distension of abdomen until the last day or two before operation. Considerable nausea and vomiting, but always after taking medicine, particularly salines or after a saline enema. Up and about the room a good part of the time. Five days previous to the operation was given cascara sagrada, which produced gripes. Cathartics were then administered, which resulted only in soreness and slight distension of the abdomen, all of which disappeared on returning to bed. A sixteen-ounce enema was then given, but only six ounces returned.

Physical examination made by Dr. Monro on the day before the operation: "Rather sallow, not jaundiced, anemic, but lips of good color. Is discouraged and a little sluggish. Moderate distension, tender in left hypochondrium, but no tumor felt. Less tender on right side. Pain on coughing. Can not lie on back without suffering considerable pain. Uses a hot water bottle constantly. No blood or mucus in stools. Pulse 80, but of poor quality. Tongue clean. Urine negative. Liver, stomach and kidneys negative. Operation advised. Diagnosis: Mechanical obstruction, probably not malignant."

Operation.—"Ether. Indefinite fullness in left iliac region, but no tumor felt. Short incision in left iliac region about opposite iliac spine. Gut distended, but no peritonitis. Dark spots in wall of gut. Hard contracting nodule in descending colon oppo-

*Read before Maine Medical Association.

site iliac spine, malignant and nearly occluding gut. Gut distended above obstruction, but no feces felt. Growth excised with difficulty, owing to short mesentery. End to end anastomosis. Drained with gauze and glass tube. Moderate shock toward close of operation, requiring stimulation. Growth reduced the lumen of the bowel to admit a director. Not ulcerated. Some small glands close to growth removed in toto. No search made for distant glands."

Pathological report by Dr. H. A. Christian: "Colon 8x5 cm., split open to display stricture 3-3.5 cm. from one cut end (a); circumference of gut at stricture barely 1.5 cm. (admitted director in life). Circumference 2 cm. towards (a) 4 cm., 2 cm., towards other extremity 5 cm. On the back is attached a considerable mass of moderately injected mesenteric fat tissue. Muscularis thinned opposite stricture to about 2 mm.

Microscopic.—Selections show part of muscularis and small bit of stroma much altered in appearance by tumor invasion and chronic inflammation. No mucosa or sub-mucosa present. Tumor is present as narrow solid columns of epithelial cells of small size. There has been some scar tissue formation and infiltration with many plasma and lymphoid cells. Tissue not very well preserved.

Anatomical Diagnosis.—Scirrhus carcinoma and chronic inflammation.

This patient died thirty-six hours after the operation, the system having become thoroughly saturated and poisoned with the noxious matter absorbed from the decomposed contents of the intestines.

Subacute or chronic intestinal obstruction may be due to a variety of causes, chief among which are malignant growths, adhesions, chronic intussusception and fecal accumulations. In this paper I shall confine myself to chronic obstructions due to malignant growths in the large intestines, to which I think that a majority of these cases are due. I believe that the diagnosis of this condition is at times extremely difficult.

Most of the cases are seen by the surgeon in consultation after complete obstruction has occurred, following a previous condition of chronic obstruction. I have seen a number of cases of this kind in which the patient was in a very poor condition for operation, the abdomen much distended, tender, fecal vomiting, inability to pass gas or feces, slight rise in temperature, rapid, weak pulse and the characteristic facial expression. I have operated in these cases as a last resort and with the hope of prolonging the patient's life, but the results were usually very unsatisfactory, as the patients were unable to rally from the operation because of their weak and septic condition.

We also see patients who have suffered from an attack of acute indigestion, in which morphine has been administered to relieve the pain, and from the administration of which the bowels are constipated. In order to relieve this condition purgatives are administered, which cause vomiting, and soon the patient is thought, to have intestinal obstruction. It is easy to differentiate this condition from that of acute obstruction, but somewhat more difficult to differentiate from subacute or chronic obstruction.

In the obstruction due to morphine we have the history of the administration of the drug; there is no rise in temperature, bowels distended but slightly, if at all, and no local or general tenderness. The above symptoms, or rather absence of symptoms, are usually sufficient to enable us to rule out obstruction due to mechanical means, but in the case reported the symptoms were negative with the exception of the extreme constipation and the occasional pain, which was ascribed to the ingestion of food. Even the administration of cathartics did not produce pain, large quantities of which were used.

I fell into the common error of waiting, hoping that something more favorable would turn up and dreading to suggest operation. I was led to do this by the normal temperature and pulse, the intervals of absolute freedom from pain, the absence of distension and tenderness, the constant passing of gas and the occasional large movement, after which the bowels would perform their function in a normal manner for several days. The onset of the disease is so insidious, and, in fact, the patient can not state with accuracy when the symptoms began, that the physician is confronted with a condition of great peril to the patient and, as in the above case, he does not realize the gravity of the situation until too late.

If a patient consults you for dyspepsia and you find that he or she is suffering from constipation, which is not constant, but each attack of which is gradually growing more obstinate and yields less readily to treatment, make very careful inquiry into the history and you may find that the patient complains of occasional attacks of abdominal pain becoming more frequent, which may last for a few minutes or several hours, and there are apt to be attacks of spurious diarrhea.

If these symptoms are present, do not fail to think of malignant stricture of the large intestine, and remember that there is but one successful method of treatment.

An occasional slight rise of temperature is common, due to septic absorption from the contents of the bowels.

A very common symptom is gurgling sounds in the abdomen and visible move-

ments of the coils of the intestines. Often a tumor can be felt, caused by the retained feces above the stricture.

There is another sign to which considerable attention has been paid, and that is the shape of the movements, particular importance being attached to tape-like movements, or solid movements which show grooves or marks on their surface, supposing that these are produced by the narrow opening through which the feces have passed. I think that this is of but little importance as a diagnostic sign, as the shape of the movements is determined by the sphincter, and as a rule it is in the ampulla of the rectum that the feces is finally molded into shape. Of course this sign is absolutely valueless in stricture of the small intestine.

In order to treat these cases successfully we must fully realize that stenosis of the intestine can not be remedied by medicinal means, and that the only hope for the patient is in an operation, which operation should be performed at the earliest possible moment, for we never know at what moment the narrow opening will become blocked and a complete obstruction be produced. Especially is this true when the obstruction is due to malignant growth in the colon, as in this condition the only chance for recovery of the patient or long immunity from the disease consists in an early resection of the intestine.

I think that the early excision of a cancer when in this location gives better results than when located in almost any other part of the body. In those cases which we do not see until they have passed through the chronic stage and complete obstruction has taken place with loss of vitality, septic absorption and an enormously distended abdomen, I do not believe that it is wise to attempt a resection of the intestine at once, but think that we should perform a preliminary colotomy, leaving the more radical operation until a later and more favorable time.

A PLEA FOR EXPLORATORY INCISION FOR DIAGNOSTIC AND CURATIVE ENDS IN MASKED CONDITIONS OF THE UPPER PORTIONS OF THE ABDOMEN. *

By Hugh M. Taylor, M. D., Richmond, Va.

A plea for an exploratory incision for diagnostic purposes in morbid conditions of the upper portion of the abdomen implies, in many instances, great difficulties attending a special and differential diagnosis, and also the imperative need of an early diagnosis to bring this field within the province

of safe and successful surgery. Pathfinders in clinical surgery and medicine and in the laboratory are here and there noting landmarks of value, but we are in many instances still far from a state which enables even the combined efforts of the clinician and laboratory worker to weld a chain of evidence devoid of weak links. In this field, as in others, we have typical cases with classic symptoms, and the diagnosis in such cases is not infrequently easily made. But, unfortunately, we have many atypical cases, and often it is difficult, if not impossible, to arrive at a reasonable diagnosis, and these cases present us with many ante- and post-mortem surgical surprises. "Qui bene diagnoscit, ben curat" is signally true as applied to morbid conditions in this field.

A limited study of this subject, as presented in the literature of the day, and a limited experience suffice to show that too many are permitted to die or are consigned to lives of individualism for the want of a correct diagnosis and a surgical intervention which promises, in many instances, the only hope of life and restored health. There is need for every voice that can be raised to sound a note of warning that when in doubt we should not deny the patient the benefit of an exploratory incision. The dread of opening the abdomen and not finding a remedial condition is common experience; but experience in abdominal surgery confirms the fact that to wait for classic symptoms in many instances is to rob the patient of a probable cure by surgical means. Within the sound of my voice are many who recall how little even the masters in surgery knew of pelvic diseases twenty years ago. Knowing so little of the morbid anatomy and the causes, our therapy was often wrong. Not until light was shed into the pelvic cavity through abdominal and vaginal incisions was modern pelvic pathology and the surgery indicated brought to the proficiency of the present time.

In the incipency of its study, appendicitis was unrecognized by many. Ocular inspection of the virulent infection in the ileocecal region suffices in a majority of instances to convert the greatest skeptic to the wish of consigning such cases to some one else, and not infrequently these new converts are little prone to procrastinate even in the absence of pronounced symptoms. The evolution of surgery of the upper portion of the abdomen promises to rival, if it does not outstrip, that in the pelvic and ileocecal region. To note the confusion of symptoms met with in some of the morbid conditions involving the stomach and bile tract, it will be sufficient to impress this subject; to do more than present a brief of these would carry us far beyond the limits of this paper.

There are perhaps no subjects more preg-

*Read before N. C. Medical Society.

nant with surgical interest than ulcer and cancer of the stomach and infection of the bile tract. An extended review of these would include many phases of gastric ulcer and its sequences, and many phases of the consequences of bile tract infection. If we recall the close juxtaposition of these organs, we note that it is as marked as is the case of the organs in the pelvis, and we have not the rectum and vagina as routes of approach.

Gastric Ulcer.—Some years ago, while lecturing to a class of about one hundred men, to impress the frequency of gastric ulcer, I quoted Ewald to the effect that 6 per cent. of the men before me would have gastric ulcer. A few days later, without premonitory symptoms, a young doctor from North Carolina, a member of the class, bled to syncope from a gastric ulcer. At that time our interest in gastric ulcer was largely focused in gastric hemorrhage and in perforation. Later research, largely through exploratory incisions and post-mortems, shows that our interest includes not only the acute complications, hemorrhage and perforations, but conspicuously the sequences of gastric ulcer are full of the deepest surgical interest and importance, and operative intervention for the relief of the complications incident to gastric ulcer has opened up one of the widest surgical fields.

Cases of acute, subacute and chronic ulcer may be manifested by typical symptoms, but all symptoms may be latent; and the first indication may be a gastric hemorrhage of greater or less violence. A perforation anteriorly into the peritoneal cavity, or posteriorly with the occurrence of a phrenic abscess. Conspicuous symptoms, such as circumscribed pain in front, pain reflected to the left scapular angle, hyperchlorhydria and hemorrhage, pain on taking food and the relief incident to vomiting may all be absent, even in the active stage of ulceration, and the symptoms manifested be only such as are common to indigestion from other causes. A knowledge of the possibility of the co-existence of ulcer and unpronounced symptoms has led the progressive spirits in surgery to open the abdomen in suspicious cases of stomach trouble which do not in a reasonable time yield to medical and dietetic treatment. The result of this treatment has shown that in a surprising number of cases the cause of the stomach disorder was due to existing gastric ulcer or some one or more of its many sequences.

Few will question the assertion that the prognosis of perforating ulcer of the stomach and duodenum will improve in the same degree as the practitioner learns to make early diagnosis of the case and to immediately secure surgical treatment. My only

case of duodenal perforation saved at a hearty supper, took a long walk, and was on the street when taken with violent pain incident to an acute perforation. For several days she had been treated for supposed slight indigestion. Localized peritonitis sufficient for a time to wall in the threatened perforation by its adhesion to the transverse colon further evinces what progress may go on while the patient is up and about and unalarmed by the symptoms presented.

A case of perforation unsuspected was recently seen; a phrenic abscess had formed and until the symptoms of acute peritonitis were manifested the patient had not been incapacitated for work. He had, however, been a prolonged sufferer from indigestion. Prior to an exploratory incision, it was impossible for me to be more accurate in my diagnosis than to surmise that it was an abscess from pericholecystitis or perigastritis, probably incident to a perforation of the gall bladder or stomach.

An experience such as I have related in these selected cases impresses and depresses me to the extent of causing me to watch with anxiety cases which ordinarily do not assume surgical importance, but any one of which may do so, and with few, if any, notes of warning. Gastric ulcer assumes a surgical interest when life and health are threatened by hemorrhage, by perforation and peritonitis, by perforation and phrenic abscess, by pylorospasm, pain, vomiting, by perigastritis and adhesions by scar tissue inducing stenosis of the pylorus, by hour-glass contractions and their sequences, and the soil for the invasion of cancer. If we recall how close these organs are together—i. e., pylorus, stomach, duodenum, gall bladder and pancreas—we fail to wonder that a perigastritis or periduodenitis or pericholecystitis should so commonly induce adhesions and result in a damaged function of the organs involved.

The mission of my remarks, as applied to the stomach, may be summed up in the single comment that in many instances there is a mechanical cause for the stomach disorder; in many instances a perverted motor power and not a secretory disorder is responsible for the chronic indigestion. Imperfect stomach drainage from mechanical causes, most of them the result of gastric ulcer, plays an important role in inducing disturbances, and gastro-enterostomy to secure stomach drainage includes within its scope the largest field for operation in benign diseases of the stomach. Early operative intervention finds the patient in the best condition to stand the ordeal of an operation. Experience at the hands of so many whose opinions merit confidence evince the truth of the claim that it is not conservative to prolong indefinitely the

medical treatment of indigestion of obscure origin. Operative intervention has disclosed in too many instances the fact that the cause would never be remedied by other than surgical means.

I have no wish to pose as an extremist. I do not wish to be classed as a pessimist as regards the work of the interne, including the painstaking laboratory worker. Every revolution in surgery savors of radicalism. It is equally true that stagnation is the soul of corruption, and certainly there is no conservatism in groping in the dark. As one who recognizes the difficulties attending an exact diagnosis, even with the co-operative work of the clinician and laboratory worker, I join in the plea, now so commonly expressed, for a more frequent exploratory incision in those cases which are not relieved by less radical means within a reasonable time.

INFECTIOUS INFLAMMATION OF THE BILE TRACT.

Twelve per cent. is a conservative estimate of the frequency of gall stones. By some it has been placed as high as 10 per cent. of men, 20 per cent. of women, and 30 per cent. of the insane.

It is estimated that 2,000,000 cases of gall-stone exist in the German empire all of the time, but, fortunately only 100,000 of the two millions of cases have symptoms sufficiently pronounced to enable the diagnosis of gall-stones to be made. One million nine hundred thousand are in the so-called quiescent state. It is known that by no means every case of cholecystitis results in gall-stone formation, any more than does every case of urinary cystitis result in the formation of stone in the bladder. Cholecystitis, being more common than gall-stones, must indeed be frequent in its occurrence. If we accept the conclusion that gall-stones are the sequence of cholecystitis, just as vesical concretions are sequences of cystitis and appendiceal concretions sequences of appendicitis, we must concede that there must have been symptoms of cholecystitis—only they were beyond recognition as such by the profession. Few recognized cases of gall-stone are met with that have not been through a prolonged course of treatment for indigestion in some form, and not infrequently for malaria, biliousness, etc. Infectious cholecystitis and cholangitis are widespread in their influence through the bile duct and pancreatic duct infection, through the formation of gall-stones and their sequences, and through peri-cholecystitis and peri-cholangitis and adhesions.

The diagnosis of typical cases is often a matter of grouping symptoms and history, but the occurrence of atypical cases is far from infrequent. To differentiate an acute cholecystitis from an acute appendi-

citis is often impossible. A perforation of the gall-bladder or rupture intra-peritoneal of a peri-cholecystic abscess with local or general peritonitis, is often impossible to differentiate from a perforating gastric or duodenal ulcer with local or general peritonitis, and this is equally true of acute pancreatitis; while a subacute cholecystitis and pericholecystitis may give rise to symptoms indistinguishable from chronic gastric disorder, or even from malaria.

More diagnoses of bile tract infection and fewer cases of biliousness is in keeping with the teaching of exploratory incisions for diagnostic purposes. Exact diagnosis through exploratory incision should not be delayed until gross pathological changes, adhesions or abscess, gangrene, perforation, cholemia, chronic pancreatitis, hypertrophic biliary cirrhosis of the liver or cancer places such cases in the class of desperate, perhaps inoperable, surgery. It is as irrational to permit an infected gall bladder to remain untreated and do the damage of which it is capable, as to leave an infected appendix to work the mischief of which it is capable. In doubtful cases, we had better operate many times unnecessarily than procrastinate too long through the dread of operating, because we can not by the symptoms presented be sure beyond question of what we shall find. An exploratory incision is attended by a minimum of danger, and the danger of delay in a majority of cases far outweighs that of confirmatory incision.

Cancer.—If we accept the fact, as stated by Ewald, that "thirty-five to forty-five per cent. of all cases of cancer involve the stomach," and by Lockwood that "next to the uterus the stomach is more commonly the site of cancer," and by Elchorn, that "among all of the organs of the body the stomach is most frequently affected with cancer," and the further fact that cancer is increasing in frequency and is only amenable to surgical treatment when diagnosed in its incipency, we must be keenly alive to the importance of an early diagnosis. Co-operative work by physician and surgeon was never more valued than at the present time, and in no field of medicine is it more conspicuous than in malignant conditions of the stomach, because of the difficulty and often the impossibility of making an early, special and differential diagnosis. The late diagnosis of cancer of the stomach is made with a fair degree of accuracy, but it is then practically useless to make the diagnosis, as the case has passed beyond the operable stage. Dr. Jonas, in his address on "Surgery" before the New Orleans meeting of the American Medical Association, says: "Our only course at present is an exploratory incision as soon as reasonable grounds for malignancy exist."

Dr. George H. Brewer writes: "The sur-

geon is now making much earlier diagnosis of carcinoma than formerly. This is largely due to laboratory methods, but even these do not give the diagnosis in time to do a really radical operation. Whenever, therefore, a person at the cancer age has a sudden onset of digestive trouble or a sudden increase in such trouble previously existing, suspicion should at once be aroused. An early exploratory incision is attended with a minimum risk, and if malignant disease is discovered it can be treated while the affected area is still very limited and glandular involvement has not as yet occurred. Only thus can the disease be reached at a time when it can be thoroughly eradicated, and by the adoption of this plan excellent results are now beginning to be shown.

Dr. John H. Gibbon reports a case of "supposed carcinomatous obstruction of the pylorus nine months after posterior-gastroenterostomy and exhibited the patient (1) to show that it was a difficult matter to differentiate gastric ulcer from gastric carcinoma when the ulcer is infiltrated, even when the abdomen has been opened"; (2) to show the advantage of doing gastro-enterostomy even in the presence of apparently hopeless malignant diseases, and (3) to explain why recovery occurs after supposed cases of gastric cancer.

"Pyloric cancer," says Mayo, "by its location introduces mechanical features which enable an early diagnosis. Laboratory diagnosis of cancer of the stomach has little importance during the operable period, because the disease is of too slight extent to interfere with the secretions. When it does so, it usually means a hopeless involvement." "Cancer of the stomach," he claims, "can be cured without excessive mortality only when early exploratory operation is undertaken."

Watson claims, "In cancer of the stomach, chemical and microscopic examinations of stomach contents, of feces, urine and blood are only of greatest value when the disease has passed the inoperable period, and often the beginning or the extent of cancerous invasion can only be known positively by an exploratory incision." This same writer says Osler recommends that an exploratory operation should be more frequently advised by physicians.

Elchorn believes "cancer can rarely be diagnosed before adhesions have taken place with other organs or before metastatic deposits have formed elsewhere."

According to Ewald, "Cancer of the stomach is an exceedingly insidious disease, and at the outset is not to be distinguished from other affections of the organ which lead to dyspepsia."

Musser says, "Gastric cancer may occur without any symptoms whatever, and be discovered after death from other causes."

Opinions confirming my limited experience could be cited indefinitely. I have preferred to present a census of opinions of others to sustain my position rather than try and impress my own.

With our present means, an early diagnosis can not be made with certainty except by an exploratory incision. It is conservative surgery and should be more frequently practiced.

ARTERIO-SCLEROSIS.*

By Chas. B. Mallery, M. D., Aberdeen, S. D.

In 1872, while Gull and Sutton were investigating the pathology of nephritis, they noticed and reported that in the interstitial form there was present a more or less general condition of contraction of the arterial system, to which they gave the name of arterio-capillary fibrosis, as it seemed to them it would best explain the condition, and they advanced the theory that the arterial condition was primary and the kidney affection secondary thereto. This was not accepted by medical men at that time. Later it became more popular, and the elder Flint in 1884 discussed the theory, and says that while it is no doubt true in some cases, it is not proven. Fifteen years later, Osler practically accepts the view for most cases, and still later the pendulum of medical thought swung clear to the other extreme, not only interstitial nephritis being accepted as one of the effects of the arterial changes, but a great many other conditions, as various forms of dyspepsia, some forms of asthma, some mental disturbances and forms of central nerve disease, as well as the heart condition that it soon causes. Somewhere between these two is, no doubt, the truth, and it is beyond dispute that arterio-sclerosis exists as a general disease of the vascular system, and I invite your attention more especially to its early manifestations and treatment.

From the nature of the process, "it being a condition of thickening of the intima, consequent upon primary changes in the media and adventitia, but which later involves the other coats" of the vessel (Osler), and, when started, involving more or less completely the general arterial system, its effects are correspondingly widespread and important. And when well established, "with its thick walled, inelastic vessels, hypertrophied heart and other organs presenting various degrees of impairment in nutrition and function, its recognition is as easy as the induction of improvement in such a case is difficult" (Rochester).

Pathologically, it being first a chronic inflammatory condition of the connective

*Read before S. D. Medical Association

tissue substance of the capillaries and arterioles, extending later to those of larger caliber, attended by the gradual contractions to which connective tissue is subject when inflamed, the actual cause of the various symptoms is due to an increased blood pressure consequent upon the more or less extensive limitation in the caliber of the arteries and capillaries, with the consequent alteration in the quality of the blood itself, due to both lack of proper nourishment, oxygenation and excretion. It being accepted as proven that only one-fifth of our bodily heat is the result of the process of digestion and the intestinal glands, the other four-fifths being the product of oxydation in the skeletal muscles, it will be immediately seen how important to the blood itself any change in the terminal circulation must be. There would be of necessity an anemia, more or less extensive, depending upon the part most profoundly affected and the degree to which the contraction of the smaller blood vessels had progressed.

There probably is no other class of cases, except those distinctly infectious, in which the cause is so important from both a diagnostic and prognostic standpoint. Age and heredity stand first, and Osler, who has evidently had some tire troubles, has put it very nicely in saying "that it depends in the first place upon the quality of the arterial tissue (vital rubber) which the individual has inherited, and, secondly, upon the wear and tear to which he has subjected it." Later he says: "Entire families show this tendency to early arterio-sclerosis, a tendency which can not be explained in any other way than that in the make-up of the machine bad material was used in the tubing." Chronic intoxication by alcohol, nicotine, lead, gout and syphilis are next common in the etiological order, and are important, as their detection and remedy is the first step toward relief. Overeating proves causative by overfilling the blood vessels of the abdomen, particularly in stout people who take little exercise. Occupations involving prolonged muscular strain is especially important.

All of these causes, except age and heredity, are more or less subject to removal and improvement by intelligent medical advice and treatment, and even age and heredity can be somewhat helped in times of stress, and as we usually find two or more of these causative conditions in the same case, the prognosis must be based upon the cause and the apparent extent and progress which the disease has made at the time of its recognition.

The symptoms of arterio-sclerosis per se are those found in the circulatory apparatus. The peripheral resistance increases the tension and volume of the pulse, slows its rate and modifies its rhythm in such a

way that the vessels fill slowly, remain full longer than normal, and slowly empty themselves again. This very soon leads to hypertrophy of the heart itself, and the area of dullness is increased and the apex beat displaced to the left. There is a muffling of the first sound, with a peculiar slight harsh or clicking accentuation of the second, heard best over the aortic valves, the accentuated closure of which, due to the back pressure, cause the sound. Increased tension is relative and it can be best recognized by the use of three fingers in feeling the pulse. With a gradually increasing pressure with the finger toward the heart, the amount of pressure required to shut off the pulse beat in the fingers beyond gives the best indication we have as to the amount of tension, and at the same time we form an idea as to the hardness of the artery wall. With this, a blood count will show a diminished number of red cells and the percentage of hemoglobin will be between 60 and 75.

The general symptoms are loss of body weight, grayness of the hair, wrinkling of the skin, mental inactivity and other signs of premature senility. Vague pains, or tingling or pricking sensations, often thought rheumatic, with numbness or persistent coldness in the limbs, are relatively early symptoms and are due to the lessened blood supply through the sclerosed vessels and the anemia mentioned. These progress, the hypertrophy of the heart is followed by dilatation, and there comes a mitral murmur heard at the apex, due to insufficiency of the valves because of stretching of the mitral ring. Later the terminal arteries become beaded or like pipe-stems, there are attacks of angina, especially if the coronary arteries are involved; anasarca or complete occlusion of a vessel, with fatty degeneration or gangrene of the part. These, with the special symptoms due to disease of some organ from lack of proper nutrition, viz., the dyspepsias or even gastric ulcer, the cardalgias and even true anginas. The interstitial nephritic conditions, those of the central nervous system, including those of the eye, make it plain that it is a great factor in most chronic diseases, and the importance of its early recognition is apparent.

The Treatment.—First ascertain the cause and, in so far as is possible, see that it is removed, or at least mitigated. Proper habits, diet and exercise are of the first importance. Removal of the mental strain of business by change of scene and occupation is often necessary. Free elimination by the use of mild laxatives or the occasional use of the sulphur waters. As to drugs, potassium iodide in doses of two grains, four times a day and continued for a long time, is of great benefit, especially

in those cases due to some poisoning from without the system. Nitroglycerine is the best drug to reduce blood pressure and relieve the overworked heart; it can be safely given until it causes flushing of the face or a slight headache, and its use can be continued for years without ill effects or a diminishing of the good effects; that is, it don't soon wear out, as so many stimulants and digestives do. Strychnia is of service when the symptoms denote that dilatation of the heart is taking place. Sodium nitrate is perhaps more useful than strychnia until the compensation actually fails. The one drug most given and which I believe is positively contra-indicated in any form of this condition is digitals, because its first effect is to increase blood pressure, of which we already have too much.

DILATATION OF THE STOMACH.*

By Ambrose H. Weeks, M. D., Portland, Me.

This condition of the stomach is described under several different names; as motor insufficiency, gastric insufficiency, isochymia, and food stagnation. The term dilatation applies to the volume of the organ and signifies an enlargement of its dimensions, while the other terms apply to the presence of food or chyme in the fasting state without giving cause. Rarely is stagnation found without an increase in the volume of the stomach, therefore I will consider this condition under the term dilatation, divide dinto two forms according to its origin. The stomach varies greatly as to size and shape, but it is only when there is a disturbance of the functions that we consider an enlargement of that organ pathological. I shall speak only of chronic dilatation, which I consider one of the most important of gastric disturbances. Dilatation of the stomach is divided into two classes, the stenotic and atonic. The first class is caused by pyloric or duodenal stenosis, either an actual narrowing caused by carcinoma, cicatricial contractions from ulcer, corrosive poisoning, simple hypertrophy or congenital.

Narrowing, due to pressure outside of the pylorus, cancer of the liver, gall bladder, pancreas and omentum, large gall stones, floating right kidney, or adhesions to gall bladder and liver.

Stenosis, produced by pressure by pressure from without, is relatively infrequent, so I will consider only that form of dilatation caused by some pathological changes in the stomach itself. In stenotic dilatation the muscular fibers of the stomach are aroused to increased activity, that the obstruction to the passage of the contents of

the stomach through the narrow opening may be, at least in part, if not wholly, overcome. As a result we find in many cases of pyloric stenosis the muscular coat hypertrophied, especially in the neighborhood of the pylorus; after a time, as the pyloric opening becomes smaller, the muscular fibers of the stomach become thin and stretch easily. This, with the weight of the stagnant ingesta remaining in the stomach, the pressure of gases generated, produce an increase in the volume of the stomach, which, unless relieved, gradually becomes larger with proportionate impairment of its functions.

In atonic dilatation there is an increase in the volume of the stomach, the presence of chyme and food particles in the fasting state, but no constriction at the pylorus. The difficulty lies in a deficient peristalsis of the stomach. This condition may result from repeated over-filling of the stomach with food and drink, rapid eating, chronic gastric catarrh or following some long, exhausting sickness. Sometimes this form is due to an irritability of the mucous membrane, which causes a spasmodic contraction of the pylorus. In these cases we usually find a high degree of acidity.

The symptoms of dilatation of the stomach, in the main, depend upon the cause, although there are some symptoms in common which I will mention before taking up the different forms. Dilatation may occur at any age, but it seems more often in middle-aged or elderly persons, although not uncommonly in children. The following are some of the early symptoms: Fullness, pressure or sense of weight in the epigastrium, increased by taking food, eructations, flatulency, regurgitation and vomiting; the appetite variable, usually first a constant dryness of the throat, skin dry, constipation, urine scanty, gradual loss of strength, and usually some emaciation. One of the most characteristic symptoms is the manner of vomiting and the appearance of the material vomited. The vomiting occurs at intervals of several days. Large quantities are ejected, which consist of fluid, particles of undigested food; often food that has been taken the day before or sometimes two or three days before. The vomiting gives relief for a time, but as soon as a certain amount of stagnant ingesta accumulates, another attack of vomiting occurs.

By inspection we find the abdomen prominent in the region of the umbilicus; often peristaltic waves can be seen passing from left to right. These waves may not be seen until started by some mechanical irritation, such as a sudden tapping on the abdomen with the tips of the fingers. This is an important symptom, so in cases where dilatation is suspected we should make a careful inspection of the abdomen.

*Read before Maine Medical Association

* By palpation sometimes the pylorus can be made out and possibly the greater curvature, especially when there is much hypertrophy of the muscular coat. By placing the hand flat over the region of the stomach, we can feel the contents rushing to and fro. A splashing sound can be heard over the stomach, when it contains fluid, by tapping with the fingers on the abdomen. The lowest point that the sound is heard marks the lower border of the stomach. The splashing sound may be heard one or two inches above the umbilicus, or several inches below. All writers agree in stating that the normal stomach is above the umbilicus; so, roughly speaking, we call the condition abnormal when the greater curvature is below. The splashing is not heard in the normal stomach a certain time after taking food; when heard below the umbilicus, it may be dilatation or gastrop-tosis. In dilatation, if the stomach is examined with the tube in the fasting state, we will find fluid and particles of undigested food; this examination should be made in the morning before any nourishment has been taken. The shape, and size of the stomach can be determined by inflation or trans-illumination. Inflation is easily done and usually is satisfactory, and is best done by attaching the bulb of an ordinary Davidson syringe to the stomach tube and inflate with air. When inflating we should compress the bulb rapidly a few times, as by this means the pylorus closes and prevents the air from entering the intestines. With the stomach inflated, it is comparatively easy to determine the general outline of that organ through the abdominal wall. The size and shape will enable us to differentiate between dilatation and gastrop-tosis. In the former the lesser curvature maintains its relation to the diaphragm with the pylorus in the normal position, while in the latter the stomach as a whole descends and becomes elongated, and the lesser curvature and pylorus are several inches below the normal position. Another method is by trans-illumination. Kemp uses this method in his clinics and considers it the most accurate of any. He uses a Lock-wood light; this is small and does not gag the patient. This is the better method where the abdominal walls are quite thick.

Having considered the more important general symptoms which apply to all of the different forms and some of the methods employed in observing them, we will now consider each separately.

The stenotic form is divided into the benign and malignant. The malignant form is caused by carcinoma either at the pylorus or very near it. Dilatation caused by malignant stenosis is more often seen in persons between forty-five and seventy, although occasionally is seen in younger per-

sons. The illness is of short duration, one to six months, often seen in persons with no previous history of stomach trouble. The disease is progressive, without periods of improvement, or at least only for a short time. There is almost always loss of appetite, and usually an aversion for meats. The attacks of vomiting may occur once a week at first, but soon every two or three days, sometimes every day or several times a day. The patient usually vomits large quantities of an offensive material, which separates on standing into a sediment of undigested food, with a grayish liquid above. Early there is a gradual loss of strength with progressive emaciation. Sometimes a tumor in the region of the pylorus, hard and irregular, may be made out, but, as a rule, not until later in the disease.

The chemical examination of the contents of the stomach after the proper test meal or the material found in the fasting state is an important aid in the diagnosis. The first test should be made of the contents removed in the morning before any nourishment has been taken. We usually find several ounces of turbid fluid, particles of undigested food and mucus. The most important finding in this fluid is the presence of occult blood. There are several tests for occult blood, all of which are fairly accurate. The one I prefer is the aloin test; this is positive when only small quantities of blood are present. It is quite important to be sure that the patient has not taken meat on the day previous to this test. In the majority of cases of dilatation caused by malignant stenosis the free HCl is absent or diminished, except in cases of dilata-tion, where the carcinoma develops upon the base of an old gastric ulcer. After the Ewald test breakfast, we should not only test for free HCl, but should also make a quantitative analysis to ascertain the amount of free HCl. Sometimes in the early stages we will find free HCl present in small quantities, but if several tests are made extending over a period of a few weeks, we will find that the free HCl gradually becomes less and finally is absent. Occasionally, when there is undigested food remaining in the stomach or the fluid contains bile, we may not get the positive reaction for free HCl when it is present, so it is always best, when we do not find free HCl to test for rennet and pepsin, as seldom are these ferments present unless HCl is being secreted. Therefore, if we find HCl negative, with rennet and pepsin present, we may assume that either there is bile in the contents or a temporary suppression of free HCl.

Lactic acid is an important symptom of dilatation caused by malignant stenosis. Although cases of carcinoma of the stomach have been found without lactic acid being

present, it is the exception rather than the rule. In testing for lactic acid, we should give the rigid Boas test meal, consisting of a tablespoonful of oatmeal to a quart of water and boiled down to one pint. When making the test, it is better to make an ethereal extract of the contents of the stomach and, after evaporating, dissolve in distilled water.

Microscopical examination of the gastric contents in this form of dilatation usually shows a few sarcine, yeast fungi, and sometimes the Oppler-Boas bacillus. The finding of these bacilli is an important sign in the early diagnosis. Although they are found in the benign form, they disappear after one or two washings of the stomach, but in the malignant form are present, even after repeated washings. Pus, although not often found, points to carcinoma. Very rarely particles of the malignant growth are found. If such particles are present, a positive diagnosis can be made.

Dilatation, caused by benign stenosis, is nearly always a sequence of gastric ulcer, where the cicatricial contractions have produced an obstruction of the pylorus. In this form we see the most extreme cases of dilatation. These cases have a history of a long period of sickness, from two or ten years, more often seen in younger persons. We usually find a history of gastric ulcer several years before. The patient complains of pressure or discomfort, often pain at stated times after taking food, especially solid food. The attacks of vomiting occur at intervals varying according to the degree of obstruction. Following these attacks are periods of comparative comfort, due to the compensatory hypertrophy, but after a time the attacks come oftener, are more violent and last longer. Later the dilatation develops to a degree when even the vomiting does not give temporary relief. The attacks at first may not have any marked effect upon the general health, but later there is progressive weakness and emaciation. The peristaltic waves are more often seen in this form, also the movements of the contents of the stomach are more easily felt. Sometimes the pylorus can be felt as a smooth oval body instead of the irregular growth of carcinoma. Blood is absent in the fluid removed from the stomach in the fasting state. After the Ewald test breakfast free HCl, normal or increased, rennet and pepsin present, lactic acid absent after the Boas test meal. Microscopically sarcine and yeast fungi more abundant than in the malignant form.

Dilatation due to atony: The degree of dilatation is not as great as in the stenotic form. We usually have a history of gastric trouble for some time, often associated with chronic gastric catarrh, is sometimes seen following typhoid fever, also seen in

diabetes, tuberculosis, or any condition where there are degenerative changes of muscular tissue. This form is seen quite often in children, especially associated with rachitis. In this form there are no decided intermissions, but the disease gains slowly in severity. The peristaltic waves are not often seen; the residue founded in the fasting state is less, the particles of undigested food are finer.

When atonic dilatation is suspected, it is best to give a meal at night of soup, toast and boiled rice (not too well cooked). In the atonic form the residue of rice found in the stomach the next morning will be small, while in the stenotic form nearly the whole amount will be found. The difficulty in this form is in a deficient motor power of the stomach and, unless associated with some form of gastritis, the secretory functions are normal. Blood is absent in contents removed in the fasting state. After the usual test breakfast, free HCl may be normal, increased, diminished or absent, rennet and pepsin present, except when associated with atrophic gastritis. The free HCl is diminished in chronic gastric catarrh, absent in the atrophic form, increased when the dilatation is caused by a spasmodic contraction of the pylorus. Lactic acid is absent after the Boas test meal. This form is often confused with gastroparesis.

The diagnosis in most cases is not difficult. The characteristic vomiting, peristaltic waves, the stomach never found empty in the fasting state. With inflation, which gives a definite outline of the stomach, the diagnosis is readily made; but to determine the form of dilatation is not so easy. The age of the patient and previous history of illness are important aids in diagnosis. A chemical examination of the contents of the stomach is of great value in determining the form of dilatation. Much depends upon the manner of conducting these tests. In doubtful cases never be satisfied with a single test, but make several under the same conditions. When giving a test meal, it is essential to know what and how much is taken. It is best to give the Ewald test breakfast, also the Boas test meal, in the morning before any nourishment has been taken. In some obscure cases it is better to wash out the stomach before giving the test meal. In all of these cases the intestinal tract should be thoroughly cleared by a cathartic before the final physical examination.

The treatment depends upon the cause. The stenotic form belongs mainly to the field of surgery. In the malignant form of the treatment, other than surgical, little can be said. A soft diet and washing out the stomach will give temporary relief and stop the vomiting.

Dilatation due to benign stenosis, when seen before the disease is too far advanced, may be made fairly comfortable for a long time by appropriate treatment, but sooner or later surgical interference becomes necessary to save the life of our patient. By keeping the patient on a soft diet, with frequent washing out of the stomach, and alkalies if a high degree of acidity, will give relief in many of these cases. One other procedure I will mention, that is, the oil treatment recommended by Cohnheim. He washes out the stomach in the fasting state each morning, then injects through a tube two to four ounces of warm olive oil, and later, when the stomach does not have to be washed out every day, he instructs his patients to take the amount of oil in divided doses half an hour before meal time.

In the atonic form the treatment will depend somewhat upon the conditions present beside the dilatation, such as gastric catarrh, atrophic gastritis, hyperchlorhydria or gastropnoia. The diet is important, and to a certain extent should be regulated according to the increase or diminution of the essential ferments of the stomach. We should be careful, however, not to deviate too far from the normal proportions of proteids, fats and carbohydrates, which are necessary for proper nutrition. If a high degree of acidity should give more of the proteids, avoid acids and all highly spiced or irritating foods. When the free HCl is diminished or absent, more of the carbohydrates and less of the proteids. The diet should be semi-solid, free from irritating particles and thoroughly masticated. It is better to give small quantities of food at frequent intervals. Some severe cases it is better to keep in bed for a short time; the milder cases should rest in the recumbent position for a time, after taking nourishment. Instruct them to lie upon the right side; in this way the contents of the stomach are brought to the pylorus, whereas in the erect position the weak muscles of the stomach are not able to force the contents to the natural outlet.

Washing out the stomach, while a much abused procedure, is of much benefit in this affection. Two important things are accomplished, the stomach is relieved of its stagnant contents which helps to distend that organ; mucus and fermenting material that irritates the mucus membrane and impedes digestion are removed.

The motor functions may be increased by skillful massage over the region of the stomach, light gymnastics, such as rotation and flexation of the trunk; also the carbonic acid baths are of benefit. Electricity gives good results in some cases, usually the faradic, unless there is much pain, then

the galvanic. Use a stomach electrode introduced into the stomach, the other over the abdomen. The medicinal treatment will depend, somewhat upon the existing conditions. If there is a high degree of acidity, give alkalies; when the free HCl is deficient, give diluted HCl. We must not forget that in these cases, in addition to the local treatment, much depends upon the general management of the patient. Plenty of fresh air, exercise, recreation, rest, mental state and proper hygienic surroundings are all essential as a part of the treatment.

COLON IRRIGATION FOR SUMMER DIARRHEA.

By Dr. W. T. Marrs, Peoria Heights, Ill.

Young children suffer so frequently from diarrhea in the summer time that this is looked upon as almost a specific disease. This, however, is not the case; the same causes produce diarrhea in the summer time as at other seasons, the only difference is that the heat of the summer debilitates the child so that it has less ability to resist the noxious influences.

As in almost all other diarrheas, the cause is fermentation of the food in the intestines, as the food remains longest in the colon, it is here that most of the harm is done.

The chief trouble is injudicious feeding. There are many savory articles of food at hand in the summer which we do not have at other seasons, and people do not recollect that the child's digestion is weakened by the heat, but give it everything it asks for.

Starchy foods and vegetables, though nutritious, are slow of digestion; the young child's digestive secretions are proportioned for the assimilation of milk, not vegetables, hence the latter are harmful foreign bodies.

The first step in the treatment is to cut down the diet to plain diluted milk. An initial dose of castor oil is excellent, none of the many substitutes will take its place. Then all the offending matter must be washed from the colon. One would think that the frequent purging would render this measure needless, but practical experience has shown that it is of the greatest importance.

For this latter procedure warm water, containing about half an ounce of salt to the quart, is very good, but the presence of a non-irritating germicide makes it still more beneficial. The best of these for this purpose is Glyco-thymoline; for the details of its use and the effect of the treatment, I would like to call your particular attention to the cases given below.

Johnnie M., aged nine months, suffered from gastro-enteritis, with much fermentation; also from fever of a remittent type due to autotoxemia. The child was breast-fed, but the quality and quantity of the mother's milk was such as to be insufficient to nourish it.

Treatment.—Gave the child cow's milk, diluted with lime water. Twice a day for three days I gave a high enema of a warm saline solution and Glyco-thymoline, equal parts. The fermentation and fever subsided and the child made a good and rapid recovery.

Lucy K., aged eleven months, bottle-fed, suffered from an acute attack of enterocolitis. The child was vomiting and purging constantly and death seemed imminent. With a soft rubber catheter attached to a syringe, we gave high enemas of salt water and Glyco-thymoline until the bowels were free from fecal matter. After that we injected cold water and Glyco-thymoline every two hours until the fever came down. Also gave this:

R Elixir lactopeptine, oz. ii.

Glyco-thymoline, oz. ii.

Oil peppermint, gtt. i.

Of this the child was given 20 drops every hour. In a few hours it was able to take and retain nourishment and its recovery was uninterrupted.

Carrie G., aged about one year, suffered from malnutrition and frequent attacks similar to those named in the preceding cases. There were frequent paroxysms of vomiting and diarrhea. The enemas of salt water and Glyco-thymoline were used two to three times a week and this exerted a corrective influence upon the irritable stomach and bowels. The above prescription was also used and the results obtained therefrom were very gratifying. Glyco-thymoline seems to be a safe and dependable antiseptic in all cases of fermentative troubles of children.

ABSTRACTS AND SELECTIONS.

THE RUSSIAN RED CROSS SOCIETY.

Hobb (New York Med. Rec.) declares the Russian Red Cross Society has not only aided the military medical department by supplying necessary materials not furnished from the army medical magazines, but has also provided trained nurses, organized its own hospitals, flying detachments, diet and rest stations, hospital railway trains, hospital boats, and the like. It has also taken an active part in the transportation and distribution of the sick and

wounded, and has as well looked after their wants in the field, on the lines of communication and at home, supplying them generously with clothing and with every essential to their comfort.

OPEN TREATMENT OF EXTRACAP-SULAR FRACTURE OF THE UPPER END OF THE HUMERUS.

Wallis (Lancet) had brought to him a man of twenty-seven with fracture of the humeral tuberosities and a shortening of one inch, which could not be reduced and held in place by any form of dressing. Three weeks after the accident the seat of fracture was reached by separating the fibers of the deltoid and pulling aside the tendon of the biceps. The upper fragment was tilted outward and backward, and the lower was drawn upward and inward. Extension and manipulation failed to bring the fractured surfaces together. The arm was then raised to full extension, which brought the lower fragment to the upper. The two were held together by two staples, whereupon the arm was brought to the side and splinted as usual.

PRIMARY MALIGNANT DISEASES OF THE VERMIFORM APPENDIX.

H. D. Rolston, M. D., and Lawrence Jones, M. D., under the above heading have reviewed the literature of the subject most carefully. They add one new case to those already reported.

The cases are well analyzed. There were found sixty-three cases of malignant disease of the appendix in the literature. Of these, twenty-one cases were excluded, because of the lack of sufficient evidence of their malignancy, leaving forty-two cases available for analysis.

There are thirty-three instances in which primary malignant disease was found in appendices removed during life, but the nature of the disease was not suspected in any case before operation.

The average age is 30.8 years. Men and women were about equally subject to the disease.

The extent of operation called for by the diseased appendix but rarely exceeded the simple removal of the appendix.

The results of the operation immediate and remote, have been surprisingly good.

The following conclusions are arrived at from an analysis of the cases.

"1. The disease is one which renders an accurate diagnosis impossible; every case in which the symptoms drew attention to this region exactly imitated appendicitis in some form.

"2. Most of the older reputed examples fail to withstand investigation, but as 80.9 per cent. of the forty-two genuine examples

have been reported since 1900, the disease can not be quite so rare as has been thought. The microscopic size of the growth in some cases makes it probable that many such cases have been overlooked.

"3. Pathologically, several varieties of carcinoma have been reported, and also sarcoma and endothelioma. The growth is usually, however, a spheroidal-celled carcinoma, which is peculiar in the early age incidence, the slight malignancy, and the resemblance to endothelioma. Colloid change is not common, as has been hitherto supposed.

"4. The presence of concretions is mentioned only in three cases out of the forty-two.

"5. The disease is not prone to affect one sex more than the other.

"6. Inflammatory changes either chronic or acute, very frequently accompany the growth.

"7. The immediate prognosis and the prospect of freedom from subsequent recurrence after operation are very good, particularly in the spheroidal carcinoma."

ADAMS-STOKES DISEASE, WITH REPORT OF THREE CASES.

Walter S. Steiner (Boston Medical and Surgical Journal) says this disease is an affection which presents clinically the following features. (1) A slow pulse, usually permanent, but sometimes paroxysmal, falling to 40, 20, or even 6 per minute; (2) cerebral attacks which consist in vertigo of transient character, syncope, pseudoapoplectic attacks, or epileptiform seizures; and (3) visible auricular impulses in the veins of the neck, the beats varying greatly, a 2:1 or 3:1 rhythm being the most common. The disease is most commonly seen in persons past middle life. Males are more frequently affected. Syphilis and myocardial changes appear to be contributing factors.

SALT-FREE DIET IN SCARLET FEVER.

Pater (Rev. des de l'Enf) submits a preliminary report of a series of cases of scarlet fever, in which instead of the usual strict milk diet, a varied but absolutely salt-free diet was given. The value of the salt-free diet has been abundantly proved in the treatment of nephritis and certain forms of dropsy, and such a diet would appear to have a distinct prophylactic value against scarlatinal nephritis.

The diet was instituted as soon as the initial fever had subsided, and consisted of bread, without salt, rice, puree of potatoes, eggs (all without salt), with butter, light desserts and milk. Careful studies of the weight curve, and of the urine were made in all cases. The author concludes that the

salt-free regimen is without danger in scarlet fever, that it is as good a prophylactic against nephritis as the absolute milk diet, and much more agreeable to the patient. In all the cases there was an initial febrile albuminuria, which disappeared at once, when the diet was given. This regimen by strengthening the patient shortens the period of convalescence, and puts the patient in better condition to withstand secondary infections or complications.

AN EPIDEMIC OF TYPHOID IN CHILDREN.

Tischler (Munchener Med. Woch.) reports a case of an epidemic amongst the school children of Deggendorf. About 200 of the poor children receive a lunch of soup at a kitchen built for that purpose. Two of these children were taken sick December tenth and stayed at home. Ten days later fifty other children were taken sick, the condition proving to be typhoid. The children lived in different portions of the town. The total number of children affected was sixty-one, and only among those who had eaten at the soup house. The disease was not transmitted through the milk or water supply.

ON REGIONAL ANESTHESIA OF THE LARYNX.

Frey (Archiv. fuer Laryngologie und Rhinologie.) After discussing the various methods of anesthetizing the larynx, the author describes a new method, which consists of hypodermic injections of weak solutions of cocaine in the region of the superior laryngeal nerves as they enter the thyro-hyoid membrane. The technique is as follows: The patient sits in a chair and the operator stands at the patient's left, while palpating the left side of the neck, in order to find the greater horn of the hyoid and the upper horn of the thyroid cartilage. Midway between these two points the hypodermic needle is inserted, holding the syringe horizontally and going directly backward, about 1 cc. of a one to one-half per cent. solution of cocaine, containing ten per cent. of adrenalin chloride is injected. The same amount is injected in the other side. Anesthesia is complete in about ten minutes. The author has employed this method in thirty cases and concludes as follows:

1. It is possible to arrest the function of the superior laryngeal nerve by deep injections of a one per cent. solution of cocaine and adrenalin at the point where it enters thyro-hyoid membrane and thereby obtain a regional anesthesia of the larynx.

2. This method has the advantage that relatively small and accurate amounts of cocaine with adrenalin can be employed. The anesthesia is complete.

3. The duration of the anesthesia averaged about twenty minutes.

4. One disadvantage is that it requires some time before the anesthesia is complete.

5. The author believes that the method is suitable for all endolaryngeal and intratracheal manipulations, including bronchoscopy. It is specially indicated in cases where the application of cocaine on an applicator is not well borne. Also in cases of foreign bodies.

APPENDICITIS AND GANGRENE OF THE VERMIFORM APPENDIX CONSIDERED AS SEPARATE DISEASES.

The object of this paper by John D. Malcolm (*The Lancet*) is to show that in a considerable number of cases of mischief connected with the vermiform appendix the initial lesion is a formation of a gangrenous patch in the wall of that part of the intestine, a condition that is frequently associated with an appendicitis beginning in the mucous membrane, but which may arise independently. He concludes that gangrenous patches forming in the wall of the appendix may bring about three well defined conditions and which are independent of inflammation beginning in the mucous membrane. First there may be an escape into the peritoneal cavity of microorganisms which excite serous, a seropurulent or a purulent exudation unlimited by adhesions. Second, the adjacent peritoneum may become adherent over a gangrenous patch, and the latter separates and is discharged through the appendix, recovery taking place. Third, a gangrenous patch may thus become sealed off, but when it separates the adhesions also give way and a localized abscess forms or a rupture into the peritoneal cavity takes place. If an exact diagnosis between the signs and symptoms of inflammation of the appendix beginning in its mucous membrane and those of the gangrenous formation which occasionally occurs in its walls could be made, the treatment would be much simplified, but the differential diagnosis may be very difficult.

THE CLINICAL SIGNIFICANCE OF THE URINARY NITROGEN.

James Ewing and C. G. L. Wolf (*The American Journal of the Medical Science*) refer to the work of Folin. He made a most complete study of thirty normal urines, whose daily nitrogen content ranged from 2.7 to 16 grammes. If one finds in examination of a urine ratios outside these limits, it may be concluded that the metabolism is not normal. A pronounced metabolic disturbance may be expressed by slight subjective symptoms only, when the process may,

at the same time, be giving an expression of disorder most forcibly through the urine. It is true in very many instances that there is a quantitative relationship between the variation from the standard and the degree of metabolic disturbance. There are, however, numerous exceptions to this. The possible influence upon the type of metabolism of certain physiological conditions, such as pregnancy, lactation, infancy, old age, and insufficient amounts of food to cover the heat exchange, is an important question. The estimation of single components of the urine is of little clinical value. The picture of the total nitrogenous excretion and its partition offers far more reliable clinical information. The writers declare that they are by no means certain how far the present knowledge of this complex subject will render this type of urinary analysis practically available to the clinician.

THE EARLY DIAGNOSTIC SIGNS OF TABES DORSALIS.

C. S. Potts (*New York Medical Journal*) gives a general description of the early symptoms of tabes, without presenting, however, anything new. Various writers are quoted with reference to the frequency of different symptoms, but the percentage figures differ considerably. Potts calls attention to the fact that ataxia is not an essential symptom of tabes dorsalis, in many instances the disease being present for a considerable length of time before it appears and more rarely in others it remaining absent. That persistent pain, especially of the lacerating and girdle types; of paroxysmal attacks of gastric pain, and vomiting, or other symptoms characteristic of the various crises which may occur in the disease; of painless swelling of one or more of the joints; of transient attacks of diplopia; of primary atrophy of the optic nerves of paresthesia, such as numbness, tingling sensations as if walking on velvet, etc.; of difficulties in urination; loss of sexual power without apparent cause, and of physical exhaustion produced by slight cause, or any of the other symptoms above mentioned should arouse our suspicions and lead us to examine for the presence of some of the symptoms belonging to the second class, viz., condition of the reflexes, pupillary symptoms, sensory paralysis, muscular hypotonia, etc. It may be stated that when not apparent, slight degrees of ataxia may be discovered by using delicate tests such as standing on one leg, walking backwards, standing on the toes, performing fine movements with the fingers, as buttoning clothes, touching the end of the nose etc., all being performed with the eyes closed.

THE NEW ALBANY MEDICAL HERALD

THE NEW ALBANY MEDICAL HERALD.

SEPTEMBER, 1907.

Old Series Vol. XXV, No. 321. New Series Vol. XIV, No. 192

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EDITORIAL.

OVERWORKED DOCTORS.

One of the trying things about a doctor's life is his being always on duty, says the Lancet-Clinic. Any hour out of the twenty-four he may be called upon to respond at once. This is also the case any day out of the three hundred and sixty-five. Dr. P. S. Conner used to relate that when he commenced he would watch his office for twenty-three hours, then go out for an hour's relief, and the patient would surely choose that hour to want his services. That the majority of doctors are underpaid goes without saying, but that many are overworked can hardly be true when we know that there are three or four times as many as are needed. It is the eternal vigilance that wears. When one has listened day and night for the bell and telephone for a quarter of a century or more, can you expect anything else than that he will be nervous and sleepless? Then, too, is that

inability to get and keep the proper help. They will not stay in of evenings, Sundays and holidays. Yet, if they were sick and the doctor's bell or phone was not answered, there would be complaints. The doctor's business would not be so trying if the doctor could rush around, do up his work and go out and enjoy or improve himself. What we need is some one in the city to whom we can telephone that we are out, where we are, our telephone number, and when we will be back. Perhaps our telephones could be turned onto this telephone. This eternal vigilance on the part of the doctor is also reflected on his family, and some of them are often kept in when servants are absent or unattainable. If such an arrangement were made, the doctor could go to the Academy, Y. M. C. A., People's or Schuler's, and be traced if wanted, even though he had no one on watch at home. If—perish the thought—he went anywhere he didn't want it known he could simply report to this central station, "Out; back at 10." It is up to some drug store or the telephone company to arrange for this, either with or without a fee, and allow the poor doctor and his family some freedom.

THE TOBACCO HABIT AND ITS CURE.

When certain matters are regarded from a cold-blooded, impersonal, scientific standpoint, their appearance is very different from the one which they ordinarily present. Take, for example, the subject of tobacco. It is a very great industry; thousands of square miles of our best land, thousands of people and millions of dollars are employed in it. It is said of this, as of other similar industries, that it gives employment to many men and helps to distribute wealth, and is therefore useful and good.

On the other hand, it is universally agreed that tobacco does little, if any, good to the consumer. All of this labor and thought and money are expended for no benefit to the race or the country. From this point of view, it is a terrible waste, a disgrace to our intelligence. What is the reason, then, for this immense consumption of the weed?

In the first place, it is a mild sedative to the nerves, producing a calm and peaceful state of mind and body. After a heavy meal, a smoke seems to take away the uncomfortable feeling of fullness and to start the digestion going normally.

These are the very best arguments in favor of this peculiar habit. Many of its opponents deny even these, and say that it is utterly causeless and senseless, but there surely must be some reason to account for the use of this same plant for hundreds of years and by nearly all nations.

The strongest active principle, as we all know, is nicotine, a very powerful depressant poison. In the use of tobacco for chewing and in the form of snuff, we can see readily enough how a minute portion of nicotine could be absorbed into the system. When the tobacco is smoked, however, the case is very different, for it is hard to understand how any nicotine can reach the body. The minute portion from the end of a cigar within the mouth can be no special factor, because the effect of the smoke is the same if a cigar holder is used or the tobacco is smoked in a pipe. It can not be any substances which have been simply volatilized by the heat of the burning tobacco, for in a long-stemmed pipe the smoke is quite cool and in the Turkish pipe it is also washed by being drawn through water before it reaches the lips.

The natural inference from these facts is that the peculiar principle which characterizes tobacco smoke must be a product of the combustion of the tobacco. It, therefore, can not be exactly nicotine, nor exactly the same as any principle found in the natural leaf, yet the effects of chewing and smoking are very similar, smoking, probably, being the more harmful.

As stated above, the effect of a little tobacco is calmative. People vary greatly in their susceptibility to the drug; the dose that would be merely soothing to an old habitue would dangerously depress a beginner. The soothing effect is a mild depression and is gained through a direct loss of nerve force; the tobacco poisons the ganglion cells, decreasing their vitality.

Such a mild degree of poisoning, occurring only once in a while, is of no great consequence; but when it is repeated several times daily, for weeks and months and years, the serious effects begin to show themselves in the nervous state of the victim. Lowering the vitality of the nerve cells soon results in a lessened vitality of all the cells of the body. The liver and the gastric and other digestive glands act with less vigor, pour out less of the digestive juices, and in many instances the composition of the secretions is more or less altered. This impairs the digestion, interfering with the general nutrition.

As the motor nerves become weakened, their control of the muscles is not so sure and complete; the muscles are apt to jerk or twitch and their strength is decreased often quite markedly. Along with other motor nerves, those of the heart degenerate in the same way. The nerve impulse goes to the muscle irregularly and in vary-

heart-beat and short, spasmodic contractions which are of no service and are quite deleterious, for they disturb the blood pressure. The weakening of the nerve power and the irregular and enfeebled beat of the heart interfere with the nutrition of its muscle.

So long as the individual goes quietly along, this weakness of the heart shows itself only by fatigue upon less exertion than normally. If the man does any heavy lifting, runs upstairs or exerts himself suddenly in any way, he is made aware that his heart is not as it should be. It beats rapidly and irregularly, often dropping beats, or going with tumultuous violence.

Death from over-indulgence in tobacco is practically never diagnosed. But when the tobacco habitue contracts a case of pneumonia, he is not nearly so well able to withstand it as the normal man. In this disease the heart is always subject to long and heavy strain; even a strong, healthy heart is greatly taxed, and one weakened by years of poisoning is in greater danger of being overcome. Pneumonia is blamed for the death of the young man, but it was the tobacco which was really responsible.

The only way to quit the use of tobacco is simply to stop. Limiting the amount of tobacco used, the number of times a day, etc., are very difficult expedients to enforce with a confirmed smoker. If the least quantity of the weed is allowed, he will soon be back again in his old habits, using as much as ever.

During the first few days, his nerves are in a pitiful state; he wishes for a smoke every few minutes, particularly after meals, and at other times when he was especially in the habit of smoking. He can not sit still, nor do any kind of continued work, nor even write a sensible letter. Unless he is a man of unusual will power, he will give it up and abandon the attempt. During the first two or three days, he needs some outside help to calm his nerves. The best preparation is bromidia, a teaspoonful of which may be taken at varying intervals as it is required.

This produces the same calmative effect which he had from his tobacco, and with its aid the distress of leaving off smoking is greatly lessened. After the third day, only two or three doses of bromidia are needed in the twenty-four hours, and at the end of two weeks a man with a fair amount of will power can get along without any help.

This treatment is so simple and easy of application that it is rapidly superseding all others. Even large sanitariums are now using it in addition to their routine of exercise, baths, and so forth. These latter measures serve principally to keep the mind occupied and thus make the cure easier.

MEDICINE—ANCIENT AND MODERN.

At a meeting of the Redlands Medical Society, Dr. Elverton Ellsworth Major read a most able paper upon this subject:

"Truth crushed to earth shall rise again." The onward march of every science, the practice of every useful art, the progress and development of intelligent thought and adherence to righteous principle have ever been, and must ever be, the battle fields of a warfare in which Truth and Error contend for supremacy. In theology, in the science and application of statutory law, in the upbuilding of the arts of production and of commerce, and with relentless persistence, in the profession of medicine has this warfare of contention reared its hoary head, permitting Error to clutch at the throat of Truth, and to strew the pathway of her victorious march with the wounded and the dead. And it were better so. Success undimmed by the cloud of battle, progress unrefined by criticism, even Truth, in all her strength and wealth of useful purpose, untried and untested by opposition would become Failure, whose insipid breath and strengthless touch would mar and blight and ruin.

And so it is that, whatever of error or of failure mark the way of the growth and progress of the science and the art of medicine, the reward to be found in modern achievement and present-day efficiency is well worth the centuries of strife and honest effort their development has cost.

Whether from that fateful day in Eden's garden, or from those later days of myth and legend in which the enthralled and unsuspecting Epimetheus opened Pandora's box whence, the legend tells us, there came forth "wallings and lament, hunger and want, distress, sickness and suffering beyond compute, and last of all maimed and wounded Hope," we may trace the physical ills that all adown the centuries have fastened their grasp upon the human frame, matters not. Even from those ancient days—so fraught with unskilled effort—until to-day men and women have toiled to learn and to apply the touch of magic, or the truth of science, with hearts and hands eager to relieve pain and restore health.

In attempting to follow in a brief essay a review of a few of the historic landmarks of the growth of medicine from the days of the tutelary gods and patron saints of medicine, from the days when the philosophy of the savage recognized a "soul" in even inanimate objects and taught that disease was the "soul" of one object attacking another, and that its deliverance required a hideous medley of sound and scent and contortion such as the "medicine men" of the savage tribes employ even to-day, one will discover that in the long ago the physician

and the pharmacist were closely allied in their study and application of the curative art—then as now, sometimes in peaceful harmony, sometimes in most unbecoming warfare. Even in those days Esculapius and Hygeia wrought together to produce the mystic potion that should bring again the strength and vigor of health to those to whom Zeus was believed to have sent "wasting fevers o haunt the land, and pale and hollow-eyed Disease to pursue man wherever he might go."

It would be interesting to trace through tireless research, and with unstinted fancy, the struggles and the empiricism of those ancient times when first it was believed that in the vegetable products of the soil there had been found properties that should serve to drive away the malign influence which come whence it might, brought in its train pain and weakness and death; to seem to hear again the religious incantations, the chanting of litanies and the bold, but fruitless, boast of the priesthood; to decipher the cuneiform inscriptions in Assyria, reading there the story of the prominence at first given to charms and incantations, and, later, reference to diseases duly classified, with some attempt to understand their pathology, to suggest means of diagnosis, and to direct their treatment, including the preparations and use of medicine. It may be we should not care to take or to prescribe the remedies then employed, for it was in those days—some sixteen centuries before Christ—that, as shown by one of these Assyrian cuneiform inscriptions, it was directed "For a diseased gall bladder, which devours the top of a man's heart, a decoction prepared of cypress extract, goat's milk, palm wine, barley, ox and bear flesh and the wine of the cellarer," should be given freely "until the gall bladder do cease to annoy, and the heart be sound again, or until the patient do cease to awake from the slumber of death." The record does not disclose whether or not the treatment was upon the "no cure, no pay" basis; but if modern conditions are the legitimate offspring of an ancestry so far removed, we may reasonably suspect that Esculapius and his immediate successors collected their fees in advance. More than thirty centuries later, or in the sixteenth century of the Christian era, Ambroise Pare, who later became known as "the father of French surgery," was told by some one very wise in his own conceit to "take newborn whelps and steep well in oil, adding liquor of earth worms drawn in turpentine. When boiling hot, pour this oil into gunshot and other bleeding wounds"—to heal them.

And thus we learn with what tardy and reluctant travail progress in the healing art was brought forth. Fortunately, however, for him and his patients, fortunately for

his successors in the art of surgery, and with equal good fortune for all mankind. Pare and those who came after him found and practiced a better way to treat "gun-shot and other bleeding wounds."

It is at least both interesting and educative to inquire why physicians and pharmacists, even centuries ago, having so much in common interest yet found so many occasions to attack each other's manner or method to be his own special right and his duty, as well.

It was in the sixteenth century that in England the sentiment of brotherly affection and mutual confidence existing between physician and pharmacist found expression in the following requirement published by the former for the guidance of the latter in his practice of pharmacy: "The apothecary must first serve God, foresee the end, be cleanly, and pity the poor. His garden must be at hand with plenty of herbs, seeds and roots. He must read Dioscorides. He is neither to increase nor diminish the physician's prescription. He is neither to buy nor to sell rotten drugs. He is to meddle only in his own vocation, and he must remember that his office is only to be the physician's cook." At about the same time in France physicians required pharmacists to take the following oath: "I promise before God, the Author and Creator of all things, one in spirit and divided in three persons, eternally blessed, that I will observe strictly the following articles: I promise to live and die in the Christian faith; to love and honor my father and mother; to honor and respect the medical doctors, who have imparted to me the precepts of pharmacy, and to do all I can for the honor, glory and majesty of physic; never to teach to ungrateful persons or to fools the secrets of the trade; never to do any rash act without the advice of a physician, nor ever to administer poisons—not even to my greatest enemy—nor to give drinks to produce abortion without first consulting one of the faculty. Lastly, to give aid and assistance indiscriminately to all who patronize me, and to keep no stale or bad drugs in my shop. May God continue to bless me so long as I obey these promises."

The old books and the records of more recent research abound with reports of the senseless strife between physician and pharmacist. It is not strange, therefore, that in those days—even before the days of so-called "patent medicines" and the innumerable multitude of products of the manufacturing chemist—the druggist sought to "get even" with his antagonist.

And so we find that, at Nuremberg, in 1581, the druggists issued a memorial to the honorable council setting forth their grievances. From this memorial I quote: "We are pained to learn that the physicians

have charged us with selling adulterated and injurious drugs. Self-preservation and honor demand that we no longer remain quiet under these accusations. Albeit, there may be persons who do not wish to deal with us, there are, nevertheless, numbers who prefer to be treated by us, and if we would dispense medicines in all cases when we are called upon to prescribe, we would shortly have more patients than the physicians. We have abundant proof that the physicians frequently overstep the boundary line of their field. For instance, they write their prescriptions in German, so that any barber or old woman can prepare the medicine, thus ignoring the druggist."

Evidently the golden age of medicine was not to be found in those distant good old days." We find, too, that opposition to, and vigorous criticism of, the men of medicine are not of recent origin. In the seventeenth century a vigorous writer telling of the woes of those who patronize a doctor said, "They are called patients when they get into the hands of a physician, for from that moment they are condemned to suffer all the tortures of the damned." It is interesting, also, to discover that many of the modern contentions were suggested so many years ago. Even Hippocrates and other Greeks in their teaching, dwelt largely on the dietetic treatment of the sick and vigorously questioned the value of drugs. It was as long ago as in the seventeenth century that, in Italy, Zacchias advanced the view that there were self-generated poisons which should be held responsible for much of the illness humanity encounters, which is practically the modern view concerning ptomaines and leucomaines.

In fact, as one traces in the literature of medicine its development amid an overwhelming mass of the beliefs of the savage, the teaching of myth and legend, of superstition and inordinate greed, of wily pretense, and of crafty deception: as one follows down the centuries, even to this twentieth century of enlightenment, and finds all along the way how much of opposition and almost vicious antagonism the intelligent and conscientious student of medicine has encountered—encounters to-day—the wonder is that so many men and women of cultured minds, of spotless character and unerring righteous zeal are to be found in the ranks of the medical profession, as earnest and sincere as men and women ever were, or ever can be, in searching after truth, proud of their legacies from the bright and noble minds of their predecessors, and glad—justly and honestly glad—in every established and proven principle in the science and the art of medicine.

It will be observed that we are not con-

sidering, except incidentally, ancient medicines, nor are we to consider, save in the same incidental way, modern medicines, the theme being "Medicine—Ancient and Modern."

Abstracts and Selections—Continued.

HEBOTOMY.

L. Selligmann (Hebotomie, Zentrbl. f. Gyn.) Stoeckel's lowest boundary for hebotomy (conjugate vera of 8 to 8.5 cm.) is too large, according to Selligmann. He has performed the operation with a conjugate vera of 7.5 m., or even 6 cm., and delivered a living child. He explains his method of making two short incisions for the passage of the saw, the soft parts being guarded by a grooved director, with drainage of the entire wound. Two additional cases, which ran fortunate courses for both mothers and babes, are to be reported in the future. Where the condition of the soft parts does not contraindicate, as in multipara, delivery should follow the hebotomy. Under otherwise favorable circumstances, this operation may be preceded by a trial of the high forceps.

INTERMITTENT HYDROPS OF THE GALL-BLADDER BY OBLITERATION OF THE CYSTIC CANAL.

E. Villard and G. Cotte (*Revue de Chirurgie*): For a long while the similarity between this condition and hydrops of the kidney was not considered. But that the relationship as regards mechanism is exact can not be doubted. It is a much more common condition than is generally supposed. The causes are divided into the congenital and acquired.

1. Congenital (a) Mesocyst; (b) persistence of the duct-valve.

2. Acquired: (a) Stones and parasites; (b) wall injuries, scars and neoplasms; (c) compressions or adhesions; (d) faults in the position of the liver and ducts.

Of all these, the stones are far the most common. They have the ball-valve action so that bile is admitted freely and allowed to escape with difficulty, thus causing a distention. Injuries to the wall occur, and are to be considered.

The next most common cause is that of faulty placement of the liver or the ducts; in those due to either a hepoptosis or nephroptosis.

The contents of the gall-bladder may be a clear, thick mucus, or mucus more or less tinged with bile. The walls are more or less thickened according to the distention it has undergone.

Without a distention of the gall-bladder the pain and tenderness are both located in the right hypochondrium. The pain is very severe, and radiates same as in hepatic colic. This dilatation continues until the obstruction to the ducts are overcome.

The tumor thus formed can be palpated in the right hypochondrium in most cases. Sometimes, when there is a marked tenderness, it is necessary to give a hypodermic of morphine.

This dilatation continues until the obstruction is overcome and the pain relieved a period varying from a few hours to two or three days. These attacks may come frequently, or be from months to years apart.

The clinical value of the intermittent hydrops of the gall-bladder is, that, when recognized, it gives a sure clew as to what changes may be expected, i. e., whether there is a complete or incomplete blocking of the cystic duct.

Treatment.—Cholecystostomy is preferred as being the most simple and the least dangerous.

OBSERVATIONS MADE FROM THE EPIDEMIC OF YELLOW FEVER OF 1905 AND PROPHYLAXIS TO BE TAKEN IN FUTURE EPIDEMICS.

Dr. James Waldower (Medical Recorder) says that prior to the demonstration of the infection of yellow fever by the mosquito, we were fighting an unknown enemy, and as a result our systems of quarantine and prophylaxis were crude and deficient and as a result of this ignorance each community added to the horror of the disease to prevent its spread. The barbarous shot gun quarantines—and, strange as it may seem, though it has been five years since the doctrine has been demonstrated and proven in 1905 many of our learned men of the profession still cling to this barbaric custom. The United States Marine Hospital and Public Health Service should have complete control of the maritime quarantine while the State Board of Health should make the laws for all within its domain, and each county and municipality should be governed by it. This would abolish the commercial quarantine, which is only too often taken advantage of. Fear of fever in former years was a secondary consideration in comparison with the greater fear of quarantine. In the present light before us there is no reason why commercial intercourse should not be continued with all localities infected with yellow fever as to the interchange of freights; but let the embargo go on as to the ingress of people to and from such infected localities. Place a guard around an infected city and if necessary let them be ten feet apart so as to prevent the spread of disease. In addition in all places where the stegomyia has its habit-

at see to it that the insect is destroyed, both in its maturity and in the larval stage. Since the mosquito in all his stages is definitely known, there is no reason why a community could not get rid of this pest, if for comfort alone, without any sanitary measures connected therewith. Then should a case of yellow fever be introduced into a community with the stegomyia absent you need have no fear of spread, for without the mosquito you can have no spread of this disease. While all communities should have clean streets and alleys the garbage removed therefrom is not a menace to the public that this little insect is, and that has been ignored in former years.

THE SERUM TREATMENT OF EXOPHTHALMIC GOITER.

G. A. Waterman (Boston Medical and Surgical Journal) refers to the various theories as to the cause of this condition and records his experience in the use of serum derived from blood drawn from the jugular vein of the goat two weeks or more after the removal of the thyroid, the serum being used subcutaneously. Of the five cases reported, two were considered as cured, two improved, and one unimproved. He thinks that in the serum treatment we have an agent which influences the disease favorably, and may, with further modification, prove to be of more uniform value. It may be along this line or by the use of the cytotoxic serum, that we shall be able to find a specific means of relieving the distressing symptoms of a most troublesome disease.

TREATMENT FOR CERTAIN CASES OF ENLARGED PROSTATE.

F. Cabot (American Journal of Urology): This is a discussion of the surgical treatment of the perilous or emergency cases of prostatic hypertrophy. A preliminary cystotomy by the perineal route should be made under sterile-water local anesthesia. This operation should not consume more than five minutes. With it good drainage is obtained, and there is practically no shock. By the operation rest is given to the bladder, and at the end of a week or ten days a prostatectomy may be performed by either the perineal or suprapubic route. Cases suitable for such method of treatment may be divided into two classes: (a) those in which there is extensive disease of the vital organs and the patients are in extremis, and (b) those in which there has been a suddenly developed inability to urinate, and in which the catheter no longer meets the indications. In both these groups of case free urinary drainage is needed. This is quickest and easiest obtained by entering

the bladder through the perineum under sterile-water anesthesia. If for some reason this route can not be selected suprapubic section should be performed. The prompt drainage of the bladder relieves the condition and the damaged organs have a chance to recuperate. The perineal section gives an opportunity for ascertaining the size and position of the prostate. In this way the character of the second operation can be best determined and the time correspondingly lessened.

The method to be followed in a prostatectomy will depend upon the position of the enlargement, its size and consistency. The perineal route is the one of choice, as it causes less shock and convalescence is more rapid. In operating by either route continuous hot irrigations should be used through the penile urethra. If such hemorrhage ensues adrenalin chloride can be effectively used by the same channel. The advantages of this method of irrigation are that it can be used continuously without interfering with the manipulation about the wound, and that it lessens hemorrhage and decreases shock.

CHOREA GRAVIDARUM.

Martin (Deutsche Medizinische Wochenschrift) from his many opportunities to observe this condition, is convinced that in the majority of mild as well as severe cases, the pregnancy need not be interrupted, but that medical treatment is almost always successful. In only three cases has he found it necessary to produce abortion, but as soon as this was done recovery always resulted after a longer or shorter period. In two cases he also had an opportunity of treating chorea in the same patient in several successive pregnancies, rather unusual occurrence. In one of these cases there was no history of any previous organic disturbance or infectious disease; in the other the chorea followed an attack of articular rheumatism. In a discussion of the treatment of these cases, Martin states that the induction of abortion should only be considered as a last resort, and then only in patients where there is present a severe endocarditis, meningitis, or similar complication. The result is often fatal, and this is not usually due to the chorea itself, but to apparent liability to puerperal infection which these patients present, although this has been lessened since the introduction of bougies or tents for the purpose has been abandoned and anterior colpohysterotomy substituted. As regards medicinal treatment, he has had good results following the administration of the bromides (bromide of soda and ammonium aa 2.0; bromide of magnesium, 4.0) together with careful attention to nursing and feeding.

THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 322.
New Series Vol. XIV, No. 188.

New Albany, Ind., October, 1907.

\$1.00 PER ANNUM.
SINGLE COPIES, 50 CTS.

ARTICLES.

FUNCTIONAL DISORDERS OF THE NERVOUS SYSTEM FOLLOWING ACCIDENTS.*

By George M. Woodman, M. D., of Westbrook, Me.

Because of the frequency of this occurrence, on account of the difficulties they present clinically, and in consideration of the fact, that as they are often the basis of litigation, they entail responsibilities medico-legally, it seems to me, that in a field such as ours, where expert neurologists are not over numerous, it is important that the general practitioner should be as well informed as possible upon the subject of the functional diseases of the nervous system following accidents. To freshen our memories upon this topic and to open the way to a discussion of its problems, I will briefly review with you this evening some of its more recent literature.

There is not as yet a complete unanimity of opinion upon all points touching these maladies, but the differences have of late years been largely cleared away and the leading authorities now stand on comparatively common ground.

The more generally accepted views are, I understand, that there is no individual neurosis as a result of accidents, but that all forms of functional nervous diseases may result from physical injury and psychic shock. It is also commonly agreed that for the present it is most scientific to class these diseases under the head of "Traumatic Neuroses."

While, as has been said, all known neuroses may be met with as a sequence of accident and injury, neurasthenia and hysteria in their modified traumatic form are the types seen in such a large majority of the cases, that practically they are the traumatic neuroses.

We will now proceed to a brief review of the modern conceptions of the etiology, symptomatology, diagnosis and treatment for traumatic neurasthenia and traumatic hysteria.

As a preliminary, it will be well for us to bear in mind, that the cases seen will as often present these two neuroses combined, as separately, and that in different cases there may be a wide variance in the severity of their manifestations. Much of the confusion of the past was due to a failure to recognize these two important facts.

Etiology.—Both traumatic neurasthenia and traumatic hysteria occur most frequently as a result of railway and allied accidents, where the conditions for both physical injury and mental shock are most typically operative. But while this class of accidents furnishes the largest number of cases, as is indicated by the name railway spine given to these diseases by the older authors, they may arise in one of a variety of ways. They frequently follow mishaps in factories, in carriages, on bicycles and in automobiles, in fact under any circumstances that result in physical commotion and are productive of mental impressions of horror and fright. They may also, and especially hysteria, arise when the physical injury is very slight.

Two cases recently seen by me bear particularly upon this point. In the one, a severe case of traumatic neurasthenia followed a scald of no great severity to occiput and the back of the neck and in the other a female patient developed a marked case of hysteria as a sequence of a fall upon a street crossing, that was attended with but slight physical injury; and not only do they occur where the physical injury is slight, but also when it is entirely lacking, as the mere witnessing of a catastrophe may produce them.

A case is related by one author where a previously strong policeman developed neurasthenia that incapacitated him for years, as a result of stopping a team of runaway horses, although he received no physical injury whatsoever.

Predisposition, either hereditary or acquired, plays but a minor role as a causative factor in traumatic neurasthenia, while in ordinary neurasthenia inquiry usually discloses the fact that the nervous system had either never been altogether normal, or that it had become more susceptible to disease through the weakening effects of excesses.

In traumatic hysteria, on the other hand,

*Read before Maine Medical Association.

predisposition occupies a more important place, although it is often difficult to establish this fact. Occupation and mode of life exert an influence upon the appearance of these disorders. Railway employees are known to less frequently develop functional nervous diseases than the passengers, though similarly exposed. This is variously interpreted by different authorities.

Some explain it on the ground that the employees are less affected by the mental impression than the passengers, because they are more accustomed to the attendant horrors, and their minds are more occupied at the time and after the accident.

Others think the difference lies wholly in the variance in mental attitude of the two toward damages. Those who hold the former opinion cite the fact that engineers show no exemption from these diseases.

Race, age and sex have some bearing on etiology. These nervous disorders are frequent in this country and rare in England, and Russian and Polish Hebrews are the most liable to them of all races. France is the country where hysteria is most commonly seen.

The active years of life, from twenty to fifty, is the period in which traumatic neurasthenia is the most liable to occur, and childhood and adolescence is the time par excellence for the development of hysteria. In traumatic neurasthenia males are more often affected than females, but this is probably due to the great exposure of the former.

Pre-existence of chronic and degenerative nervous diseases renders the victims most liable to develop functional disorders and the weakening effects of alcoholic excess operate unfavorably.

The circumstances of the patient after injury have an important bearing. A forced early return to work, by occupying the victim's attention, prevents worry and introspection and acts as a favorable factor, while idleness, with its opportunities for self observation and worry, have the opposite effect. Vexations of litigation have a marked tendency to make this condition worse.

The importance of the expectation of damages as a causative factor must not, however, hold an unwarranted place in our opinions. It is now known that many cases develop where no thought of litigation is entertained, and not a few cases fail to improve after a satisfactory settlement of damages has been made.

Symptoms and Diagnosis.—There is usually an interval between the occurrence of the accident and the development of the symptoms in both traumatic neurasthenia and traumatic hysteria. This is known as the latent period and varies from a few days to several weeks in time. Immediately following the accident there are present usu-

ally the common symptoms of physical shock, if there has been any severe bruising or concussion, and when severe blows are received about the head consciousness is lost for a longer or shorter time.

Even when there are no evidences of such injury, consciousness may be impaired. Mental confusion is often present and the details of the accident are frequently not remembered, even though insensibility did not occur. If physical injuries are not sustained that prevent locomotion, the victim often walks to his home or some other place of shelter.

In traumatic neurasthenia the most permanent mental symptoms are irritability, anxiety and depression. Slight noises or jars are sufficient to cause extreme annoyance and to prevent sleep, and the disturbed sleep is often accompanied by annoying nightmares. Indecision of mind of an exaggerated degree develops and the patient is worried by the most trifling affairs of every day life. Morbid fears are frequent and the apprehension that "something is going to happen" is constantly present. The patient becomes morbid and introspective and it is hard to distract his attention from his condition. The common symptom of non-traumatic neurasthenia, mental fatigue, is marked in the traumatic form and brain tire and confusion are easily produced. Discouragement, anxiety and fatigue are seen in the facial expression. Mental depression in a few cases goes on to an extreme degree and true insanity of the hypochondriacal type has been known to develop.

In traumatic neurasthenia the motor symptoms are not marked and functional paralysis of muscles is not seen. The patient simply becomes easily physically tired and all exertion is irksome; walking is particularly fatiguing. In the gait there are no abnormalities due to loss of muscular power. The patient walks slowly but steadily, without uncertainty or ataxia. The patient may use certain muscles unwillingly on account of pain in them, and there may be stiffness of the spine, caused by pain in the muscles of the back. Tremor is constant and is fine and rapid, and is chiefly intensified by emotional influences and fatigue. At times it disappears altogether, and when present is seen most often in the muscles of the face, the tongue, and the hands.

On the other hand, in traumatic hysteria motor symptoms are pronounced and offer important problems of differential diagnosis. Paralysis of a functional type are seen. They are not confined to certain groups of muscles, as in palsies of organic origin, and there is usually a period of some time between the exciting cause and the appearance of motor disturbance. In hysteric paralysis it is to be remembered that there are no serious trophic changes and the electrical reactions remain normal. The reflexes are usu-

ally normal or hypertypical and the bladder and rectum as a rule are unimpaired.

The most common sensory disturbance of traumatic neurasthenia is pain, and the most usual location is the spine. It exists most commonly as a general soreness and weakness in the back, with areas of hypersensitiveness over certain vertebrae of the cervical and thoracic regions. Aching pains in these localities are distressing and light pressure or tapping on the vertebrae is attended by active demonstrations of suffering on the part of the patient. That no physical injury of consequence is present is shown by the fact that quite decided pressure can be made without suffering, if the patient's attention be distracted. The patient often complains of pain at the "base of the brain" in traumatic neurasthenia, a symptom frequently noted in the non-traumatic type of this disease. The fact that there may be real physical injury of the bones of the spine, that ligaments and muscles may be torn, is to be borne in mind, and when associated with neurasthenia may offer difficulties of diagnosis. Repeated examinations, carefully conducted, in connection with other facts, are generally sufficient to make the distinction.

Numbness, tingling and feelings that something is crawling on the body are common. Anesthesia in true traumatic neurasthenia is not present, while in traumatic hysteria it is the most commonly noted sensory symptom.

In traumatic hysteria hemi-anesthesia is the most frequent topographical distribution of cutaneous insensibility. Less frequently there are scattered areas of anesthesia. The degree of loss of sensibility is variable, ranging from slight impairment to the possibility of not sensing deep pin thrusts. It is an important diagnostic point that the anesthesia does not follow the distribution of peripheral nerves or of spinal segments, and also the location is liable to sudden changes.

In traumatic hysteria, hyperesthesia of localized areas is seen, and is usually more pronounced at any real or supposed sight of physical injury. In the paroxysmal type of hysteria, which, as has been said, is rare in this country, we also have the so-called hysterogenic zones, pressure upon which produces a convulsion.

Subjective disturbances of the special senses, such as flashes of light, a sense of early fatigue in the use of the eyes and buzzing in the ears, with hyperacuity of hearing, are usually seen in traumatic neurasthenia. Dizziness, which is attributed to a functional disturbance of the organ of hearing, is frequently present. The pupils are equal in size and react quickly to light and accommodation, and the fundus of the eye is normal.

In traumatic hysteria, also, the eyes are found to be anatomically normal except

from pre-existing organic disease or defects, but the conjunctivae are usually anesthetic, the visual field is contracted, and there may be marked impairment or total loss of vision, but of temporary duration.

Functional disturbances of the other organs of sense are common. The disorders of these special senses are usually unilateral, and most frequently occur in the side of the body which is the seat of cutaneous anesthesia.

Disturbance of the vascular system in functional nervous diseases of traumatic origin are pronounced. The heart is irritable, and on examination is often found to be as rapid as 120 or 130 beats per minute, and may be irregular and intermittent, and there are the subjective symptoms of palpitation, precordial anxiety and oppression. Unless there is pre-existing organic disease, degenerative changes of the vascular system are not found.

Gastric irritability, constipation and other functional disturbances of the digestive system are seen in most cases and a disordered state of the sexual organs is very commonly noted.

In traumatic hysteria the joints are frequently affected. The skin over the affected part is extremely sensitive and surrounding the joint there are local areas of cutaneous anesthesia. If of long duration, organic ankylosis may occur. The diagnosis from organic disease depends upon the presence of other symptoms of hysteria, by the lack of sufficient trauma to produce physical injury, by the fact of their sudden disappearance and the frequency of relapses.

A matter of great importance in connection with these functional disorders of the nervous system is the element of simulation. As there is no organic base for these disorders, and the symptoms are largely subjective, definite proof of their real existence is hard to establish. Corporation officials, lawyers and other non-medical men are always skeptical, and even physicians whose experience and knowledge of nervous disease is not extensive, usually underestimate their gravity, if they do not place the victims wholly in the category of simulators. On this point it may be said that those most capable to form opinions, both by experience with cases and by special study, are most pronounced in the view as to the infrequency of simulation, and their views are strengthened by the fact, as before stated, that in many cases the symptoms persist after claims have been settled, and by the added fact that in those cases where the factor of litigation does not enter, obstinate hysteria and neurasthenia following accidents is seen.

The large sums of money that are being paid in settlement of damage suits offer a great temptation to defraud, and attempts at simulation now and then occur. But in

contested cases, when a thorough and prolonged examination of the subject is made by competent men, the difficulties are so many in the way of the dishonest, that fraud is usually exposed.

In a class of cases as susceptible to suggestion as are those of neurasthenia and hysteria, the tendency of the sympathy of friends, the persuasion of lawyers, and the expectation of damages, to create an exaggeration of symptoms, is to be borne in mind and given due weight.

A matter of medico-legal importance is the necessity of determining the pre-existing state of the nervous system in these cases. There is large literature on this aspect of the subject, but mere mention of the fact is all that is permissible here.

The differentiation of functional from organic disease in traumatic cases is a feature that demands a thorough investigation and which offers many difficulties. Our present knowledge gives us the means whereby we may arrive at generally correct conclusions.

Prognosis.—It is important that we should know the views of the best authorities upon the prognosis of these disorders. In those cases where the awarding of damages is in question, it is of especial moment that the physician whose opinion is sought as to the probable course and termination should be sufficiently informed to advise intelligently. On this point Peterson and Hayne, in their recent book on Legal Medicine, have this to say: "At one time it was believed by physicians and is still the very general opinion of laymen, that traumatic neurasthenia or hysteria begins to improve as soon as litigation is at an end, and that of all remedies, financial compensation is the most speedy and the most certain in its action." Larger experience has shown that this view is incorrect. It is true that in the traumatic neuroses, as in diseases of any character, annoying and exciting influences exercise an unfavorable influence and that improvement in symptoms ordinarily follows when such circumstances cease to exist. Nevertheless, there are many rebellious cases of accident neurosis in which there is no question of damages, and in many of those which do become the subject of litigation, the patients improve but little or not at all, even when the suits are decided in their favor.

A sufficient number of cases have been under observation for the necessary length of time to say that, as soon as conditions can be made favorable, a large percentage will begin to improve and eventually regain their health. Grave cases are encountered in which the patient remains a useless neurasthenic for years, and eventually dies of some degenerative disease. Where there is pre-existing organic nervous disease, the prognosis is always bad.

As to statistics, one authority reporting

43 cases, gives 3 entirely well, 7 with slight subjective symptoms, but able to work, 11 are only partially able to work and 8 are in statu quo. Of 140 cases reported by Page, after a lapse of five years, 70 per cent. were cured, 24 per cent. had some symptoms left and 6 per cent. died from various causes.

Treatment.—Nothing special needs to be said as to the treatment of these diseases.

There is no specific medicine and the indications are practically the same as in ordinary neurasthenia and hysteria. The importance of litigation as an exciting cause has been mentioned, and the necessity of the removal of this unfavorable factor at an early date as possible, is urgent.

SURGICAL TREATMENT OF TALIPES PARALYTICA.*

William Thompson Berry, B. S., M. D., Birmingham, Ala.

Only a few years ago most of the cases of paralytic talipes were regarded by the average physician as without hope of benefit; and even the orthopedic surgeon would content himself with an effort to prevent the deformity if he happened to see the patient in time. In at least eighty per cent. of paralytic disabilities the lower extremities are involved, and the purpose of this paper is to deal in a surgical way with those cases which come under the head of talipes paralytica, as this term represents nearly all of the acquired deformities about the ankle, the origin being largely in the spine.

Wiener, in discussing infantile paralysis, says that the paralysis is a sequel to a preceding inflammation of the anterior horns of the gray matter of the spinal cord, which terminates in greater or less destruction of the ganglion cells. The muscles which are supplied by the diseased nerves, being deprived of their trophic centers, degenerate. The muscle may be destroyed or only weakened; but it loses its function and fatty tissue develops. The surgical treatment is based on physiologic principles, and the operation to which I wish to refer briefly is the one of tendon anastomosis, which I believe offers, better than anything else, brighter prospects of materially adding to the comfort, convenience and usefulness of a very large class of these patients, who would otherwise be dependent on forms of mechanic treatment. This operation is likewise applicable in traumatic loss of function of muscles and tendons, spastic paraplegia and congenital deformities. An apparatus judiciously applied may be the means of some degree of relief in some cases; but it

*Read before Medical Association of the State of Alabama.

is so slow and much less effective than is the surgical treatment.

It is better not to undertake a tendon-graft until the degree of final paralysis has been made out, which is usually about two years following the attack of polio-myelitis. Reported successful cases resulting from this operation from all parts of the country bespeak of its value in restoring the function of paralyzed parts and preventing further deformity. The method of Lange, by which the tendon is attached to the periosteum of the bone with sterilized silk sutures, is to be preferred to that of grafting muscle to muscle, for the bond of union secured by this means is very much stronger and more enduring. The plan of the operation should always be worked out in advance and an accurate knowledge of the function and strength of each muscle about the ankle joint must be had. The movements of the foot also must be appreciated; and it is to be remembered that these movements are controlled by one or more principal muscles with their respective assistants; as, for example, the movement of dorsal-flexion is controlled by the tibialis anticus, the peroneus tertius assisted by the extensor longus digitorum and extensor proprius hallucis. The two flexions are carried on at the ankle joint and consist of moving the foot forward and backward, only one articulation taking part in the movement; the lateral movements being accomplished by the tarsal articulations, especially the astragalus calcis articulation.

The normal attitude of the foot is at a right angle to the leg, and will remain practically in that position unless influenced by some force such as the functional use of any of the muscles or some outside power. When one group of muscles becomes paralyzed the contraction of the healthier group brings about a deformity at a gradual rate. For example, paresis of the whole anterior group of leg muscles will cause an equinus by contraction of the calf group; and if the tibialis anticus is paralyzed, there will be an equino-valgus from the action of the calf muscles and peronei group. The simpler movements of the foot may be sacrificed if it becomes necessary in order to preserve the important ones; for extension or flexion of the toes is of little importance when compared with adduction, abduction, flexion, or extension of the foot. The purpose of a graft is to better distribute the powers remaining about a joint, and it is an advantage, if you can do so, to choose a reinforcing muscle of the same group, or at least a muscle having a similar action to the ones paralyzed for a graft. This can not always be done, as polio-myelitis does not affect the muscle to suit the surgeon; and then a graft of a muscle of antagonistic action will have to suffice.

By contracting, a muscle performs its physiologic act; and it should make no difference whether its tendon is so attached as to produce adduction, or abduction; the result would be accomplished. The brain will need little or no training to perform the desired motion in the muscle, if the muscle grafted has previously performed a similar movement or assisted in the same movement. But should a flexor be required to do the work of an extensor muscle, then it will probably necessitate the education of the nervous system to the new condition. The cerebral action in regard to the future action of a transplanted muscle is an intricate question, and it will no doubt be explained by the neurologist or physiologist. No operation requires stricter asepsis than the one of tendon anastomosis if good and satisfactory results are to be gotten. The incision should be large enough to expose to view all tendons that are to be grafted and the operation done under an Esmarch bandage. Paralyzed tendons are easily recognizable by their dull ashy color, while the healthier ones are a glistening white. The tendons utilized should be scarified, and sutured firmly to the periosteum with silk sutures. The foot is put up in a plaster dressing in an over-corrected position, and so maintained from five to eight weeks. The patient may be allowed to walk about with axillary crutches in two or three days after the operation, and in another week he is able to use the member. Successful results may be gotten if perfect union of the wound is had and massage and electricity be given for eight or twelve months following the operation. Because it is used sometimes in combination with a tendon graft, I make mention of the operation of arthrodesis, which is the formation of an artificial ankylosis. It is employed for the purpose of stabilizing a dangling support for the finer movements of the front part of the foot; but its field of usefulness is very limited. Removal of the astragalus in conjunction with a tendon graft of the peronei tendons to the os calcis in talipes calcaneus is one of its most effectual fields of usefulness. I would not have you over-estimate the possibilities of tendon-anastomosis; but I recommend it as being at the present time the most efficient means of successfully relieving the direful results of anterior polio-myelitis. It is only curative in a sense when the paralysis is confined to one of the weaker muscles.

NEURASTHENIA.*

By J. Thomas Wright, M. D., Winston, N. C.

Neurasthenia is a rather comprehensive term, derived from the Greek "neuron"—nerve, and "asthenia"—exhaustion or weak-

*Read before North Carolina Medical Society.

ness, and covers a variety of functional disturbances of the nervous system, with great irritation, and lowered vitality.

It is due to a variety of causes, chief among which are the strenuous life, excesses of various kinds, overwork and worry. Neurasthenia, also, is often a result of other diseases, such as influenza, typhoid, syphilis, alcoholism, or chronic narcotism, surgical operations, anemia, shock, injuries, auto-intoxication, impaired metabolism, and in women menstrual or other troubles of the generative organs, such as prolapsus, lacerations, the menopause, etc. In males, prostatitis and masturbation are causative factors.

Most authors acknowledge that heredity plays an important role by endowing the individual with a neuropathic tendency, and point to the progeny of tubercular, alcoholic or syphilitic parents as proof.

There is a close relationship between neurasthenia and the sexual function.

Neurasthenia usually occurs between the ages of 15 and 45.

Symptoms.—Great fatigue, mental and physical, occasioned by the least exertion of body or mind, general irritability of the whole nervous system, with vagaries of any of the special senses, and intractable insomnia, are the more pronounced symptoms.

The mind is irritable and apprehensive, and there is a loss of memory. Curious and interesting mental perversions are frequent, and melancholia is often pronounced.

The reflexes are heightened, and muscular tremors in the extremities are seen. The spine is nearly always sensitive, and back-ache is a persistent symptom. The urinary secretion is generally increased, the fluid being of a low specific gravity. There may be obstinate constipation, or a watery diarrhea. Exhaustive sweats occur, and there is usually a coldness of the hands and feet—sometimes a subnormal temperature.

Tachycardia is a prominent symptom, and headaches are common. Anorexia is often pronounced. Hyperesthesia of various parts of the body often occurs, and an interesting symptom, seen sometimes, is severe pain in the region of the appendix, simulating appendicitis. A sense of suffocation, throbbing of the arteries and vertigo are common symptoms. Vision is usually impaired. There is more or less sexual impotence.

Pathology.—There is a starvation of the nerve cells, due to deficient metabolism, with an accumulation of the waste products of the body, which enter the circulating medium, causing auto-intoxication, and irritation of the cortex, and through the nervous system an inhibition, or perversion, of the functions of various organs.

The body secretions are altered, the kidneys rarely throw off the solids like they

should, and uric acid accumulates and adds to the irritability of the already quivering nerves.

The nutrition of the whole body is usually greatly impaired. There is evidently deficient oxidation—a point which should be remembered in the treatment. The absorption of toxins from the intestinal canal—caused by changes in the digestive juices, by imperfect digestion, fermentation, and by bacteria—constantly takes place, and is the chief cause in perpetuating the trouble.

One should remember, in studying functional nervous troubles, that severe mental strain, grief, great worry, or marked depression will alter or inhibit the secretions of a number of the organs of the human body.

Close study and clinical observation have led me to believe that the primary or essential causative factors in hysteria, neurasthenia and incipient insanity are closely allied and correlated.

Prognosis.—While these cases are exceedingly hard to treat, still, with tact, persistence and care, and where there is no pronounced hereditary taint, the prognosis is usually good, with thorough treatment.

Treatment.—First of all treat and remove the cause; then with nutrition rebuild the impoverished and wasted nerve cells, and induce to activity all the various functioning cells of the body. Yet, treatment must be not only of the body, but of the patient's mind as well. This may partly be accomplished by pleasant surroundings, by cheerful companionship, by music and by outdoor games, drives and other diversions, as the patient improves.

It is well to remember that, in this disease, we have more or less degenerative changes occurring in the nerve cells, admittedly due to irritation and starvation—no matter what the primary cause may have been—and a loss of tonus, with a perversion of certain functioning cells.

Just what changes take place in the internal secretions, or the role they play in this trouble, is not known. We do know, however, that the whole human economy becomes erratic, and that there is apparently a pathological reciprocity between the sensitive brain and the whole perverted and diseased digestive tract.

Physical exercise, or work, is necessary to the proper performance of the functions of the body—a fact that escapes most people—as it increases respiration, circulation, oxidation and elimination; hence, exercise, graduated from passive to the most active, is of the utmost importance in the treatment of neurasthenia.

That the waves of sunlight have a powerful curative influence in the treatment of this disease, is recognized, and should be used in the treatment of all cases of neurasthenia—sunbaths being especially beneficial. As soon as possible, patients should be kept

in the open air, where the oxygen, so necessary, may be obtained in sufficient quantities.

The patient must make every effort to get well, for this is a disease where self-help is of the utmost value.

Cases due to alcoholism, or chronic narcotism, should be treated for those habits and their baneful influence removed. In women where the disease is due to lacerations, mal-positions, etc., surgical intervention should be insisted upon, as a cure is impossible so long as the primary cause exists.

Persons who have suffered with neurasthenia, should for some time live the "simple life," and avoid the rush, noise and worry incident to city life; should be careful and moderate in their diet, should avoid excesses of any kind, have regular habits, and should take plenty of exercise in the open.

The patient should have sleep—and plenty of it. At the beginning of the treatment he must have absolute rest—mental and physical. Massage in the morning, followed by a sponge bath and an alcohol rub, are very invigorating and should be employed. Later, as the patient improves, he should be given the cold douche. Electricity in the form of the static, or mild faradic current, applied particularly over the spine, soothes the nerves and aids the cure by stimulating cellular activity.

Weir Mitchell's system of treatment may be used in the worst cases. High irrigation of the colon is useful in suitable cases. Both the hot and cold pack are very beneficial, used according to indications; the hot pack being one of our best remedies for the intractable insomnia which is present in these cases.

As hypernutrition is an end sought for, the patient should be fed often on easily digested, or predigested liquid food. Milk, egg albumen, meat soups should be used at the beginning, followed by more solid food the digestion and general condition improve. Fruit juices are also of much benefit.

All the eliminating organs must be kept active by appropriate remedies. This is one disease where suggestion—either simple or hypnotic—often gives most brilliant results; but it must be used tactfully.

A mild but invigorating climate, change of scenery, sea baths, or a sea voyage, are all of great utility in the treatment of neurasthenia.

As to drugs, I find the glycono-phosphate of calcium and strychnia nitrate to be the best builders, while the compound of syrup of hypophosphites is a close second. I give the glycono-phosphate in three grain doses.

It is well to give a good mercurial purge at the beginning of the treatment, and the bowels afterward should be kept open by laxatives. Phosphate of soda and cascara

are excellent for that purpose. Where there is much gastric irritation or catarrh, lavage with the stomach tube should be employed. The nitrate of silver pill (one-eighth grain) may be used for the same trouble. Iron and arsenic may be given with benefit—the peptonated preparations of iron being best.

Salicylate of soda, or some of the laxative lithia salts, may be used to eliminate the uric acid and to relieve pain.

Patience and perseverance are necessary to obtain results. I may add that I have found the sulpho-carbolates and creosote to give efficient service in the fermentation and diarrhea incident to this disease.

HEPATIC CONGESTION.

By W. T. Marrs, M. D., Peoria Heights, Ills.

The liver is a very large organ, and its functions are many and important. It is, or should be, constantly at work. This does not mean that the bile should be constantly flowing in a steady stream, but the functions connected with the transforming of the sugars into glycogen and the release of the glycogen, the influence which the liver exerts on the blood—these are in perpetual operation. A great amount of blood goes through this organ, the portal vein brings to it all the blood which goes primarily to the stomach, the small intestine and almost the whole of the larger intestine. It has its own proper artery, the hepatic, for its nourishment.

It is easy to see that when anything deranges the blood supply of the liver the whole body will quickly feel the effects. One of the commonest troubles of this class is congestion. Engorgement of the portal system following excessive eating or drinking throws an undue amount of blood into the liver, and when this is kept up for many days in succession the function of the organ is bound to be disturbed. This is really the cause of the vast majority of cases of hepatic congestion.

Anything which interferes with the exit of the blood from the liver will produce a passive congestion. Faulty heart action is responsible for most cases of this class. Valvular disease is the ordinary cause, and there are many people who have this affection without being aware of it. Weakness of the heart muscle will produce a general stagnation of the circulation, in which the liver suffers more than most other organs. Some diseases of the lungs, also, will give rise to similar results: pneumonia is probably the worst, but asthma with emphysema produces a chronic condition of greater or less hepatic congestion.

The pressure from behind, the vis a tergo, of the blood in the liver is not very great, and in a state of health the exit of the blood from this organ is aided by other means.

The movements of the diaphragm, which produce an intermittent pressure on the liver help greatly to force the blood along. Those persons who exercise, and consequently breathe deeply, are rarely afflicted with hepatic troubles, and almost never with congestion. The muscles of the walls of the abdomen in their movements also alternately increase and diminish the pressure within the abdominal cavity, helping the circulation of the blood.

Stagnation of the bile in the hepatic and common ducts also tends to produce a state of congestion of the liver; in these cases relief comes when the bile is made more liquid and is forced out into the bowel.

When the liver is congested the portal system also fills up with blood, hence one of the best measures for relieving hepatic congestion is to give a saline, which acts by abstracting water from the vessels in the walls of the stomach and intestines.

Thus we have the three indications for the treatment of this disease. The preventive is exercise, increasing the work of the diaphragm and the abdominal muscles. In very mild cases this alone is sufficient for a cure when combined with proper diet.

To fulfill the other two indications a combination of several salines has been devised which both liquefies and increases the amount of the bile, and also depletes the portal vessels. From its function this preparation is named *sal hepatica*, and its great effectiveness will be shown by the cases cited below. In some instances I begin with a moderate dose of calomel, but it is rarely absolutely necessary.

Case I.—Mr. Andrew M., a street-car conductor, age 28. He suffered from a train of symptoms usually designated as "bilio-ness." The tongue was coated a dirty yellow, the conjunctivæ were tinged, showing absorption, and there was a swollen and sore condition in the hepatic region. The man was unable to perform his work and seemed to be growing weaker all the time.

Treatment.—Gave him six one-grain doses of calomel, one dose to be taken every three hours, the last one to be followed by a teaspoonful of *sal hepatica* every hour until there was thorough alvine elimination. After that he was instructed to take a teaspoonful of this salt night and morning until the tongue cleaned and the symptoms all abated. He made a good recovery in a few days and returned to work.

Case II.—Mrs. Sarah K., age about 60. Suffered frequent attacks of indigestion in which her liver seemed to be the storm center of trouble. She always became jaundiced at these times, showing evidence of bile pigment in the blood. I gave her a bottle of *sal hepatica* and instructed her to take a teaspoonful night and morning, and to lessen the dose if the catharsis was too free. The medicine has corrected the hepatic

function very nicely, and there has been only one slight recurrence of the trouble since she began taking it. It will certainly prove curative in this case.

Case III.—Miss Pauline G., teacher, age 21. Suffered constantly from constipation and had frequent attacks of headache. The liver function was abnormal, there was bloating after every meal, and a permanent tenderness in the hepatic region, with occasional pain in the right shoulder. Her skin at frequent intervals showed the effects of hepatic derangement.

Treatment.—She was admonished to live on mainly a fruit and farinaceous diet and to drink water copiously. Also gave a teaspoonful of *sal hepatica* three times a day with instructions to lessen the dose as the bowels became loose. The young lady has improved steadily under this treatment, she no longer suffers from headache and indigestion, and has increased considerably in weight.

FURTHER OBSERVATIONS ON GASTRIC SURGERY.*

H. M. Lee, M. D., New London, Conn.

At the last meeting of this society I read a paper dealing for the most part with the surgical aspects of gastric ulcer, with the report of an operation in a case of multiple gastric ulcer. That gastric surgery has advanced, in a few short years, as to have become one of the greatest triumphs of modern surgery, and that in the advancement it has been proven to be not only efficient as a radical curative measure but also as a palliative measure in certain diseases, giving relief from pain and suffering which no pen can justly portray, forces its triumph upon us and holds our attention. It is my desire, therefore, to bring before you a few facts now established, in regard to the stomach as a point of attack by the surgeon, and to particularly call attention to malignant disease of this organ.

In view of the fact that in surgery we have a means of radical, positive cure of disease or conditions, and that it is in this sphere where surgery is attempted in the vast majority of cases, the palliative measures we have recourse to in surgery are apt to be overlooked, but if so, surgery is robbed of one of its most brilliant aspects. Nowhere is this department of surgery more perfectly seen than in certain diseases or conditions of the stomach.

Beginning with the operations of gastrotomy in 1840, by Egebert, in 1874, successfully by Jones, surgical interference in stomach cases rapidly advanced up to a certain point, and after such operations as gastrotomy, gastro-plication, operations on

*Read before Conn. State Medical Society.

the pylorus, had been completed and obtained a standing in surgery, a lull came, lasting for some time. In the year 1893, operations upon this organ took a new start, when Czerny, Milkulicz, and others, attacked the stomach for relief of gastric ulcer. From 1894 to 1898 several operations for relief of gastric ulcers, with excellent results, were accomplished. Upon these brilliant achievements came an operation by Schlatter in the year 1897, for complete removal of the stomach. In the space of two years three operations of this kind had been accomplished. That complete gastrectomy may have been an operation of too radical a nature, seems possible, and appears probable now, but it was a great stride in gastric surgery, and from this extremely radical operation has arisen, what is to-day, one of the brightest achievements of the surgical art, for there has been developed the operation of partial gastrectomy, which in many cases of malignant diseases of the stomach gives a fair chance of cure, and in favorable cases, a complete cure can be accomplished.

As I have previously stated, it is my desire to bring before you the field that surgery opens up to us in the malignant diseases of the stomach, and in so doing, shall quote statistics of men who well might be called pioneers in this work.

I shall refrain from giving histories of cases in my own experience, as well as going into details of various symptoms and diagnosis, limiting this paper to a few technicalities of operative procedures, but above all, appealing to the general practitioner for more early diagnosis and his sanction for radical treatment.

But a few years ago malignant disease of the stomach carried the patient to death, while all that could be done, or was done, was to aid the unfortunate along the way, relieving partially at first, not at all later, till worn out by the suffering, as well as starvation, morphine alone made the last of life hardly bearable, and death gave the only relief.

I want to impress upon you the fact here, that when the pyloric orifice becomes so constricted by a malignant growth that motor insufficiency of the stomach begins, or even before motor insufficiency is well established, the patient is starving, and it is a great point to decide whether the picture before us is not due as much to starvation as to malignant disease.

I am convinced that in the early stage of the disease, starvation is the main factor which pulls the patient down, and would deter many medical men from consenting to radical measures. In the later stages, with the disease advanced beyond a possibility of radical cure, starvation is still a potent death blow.

To illustrate, allow me to mention this case briefly, which I operated upon last De-

cember. This was a case beyond any possibility of a cure. The tumor mass was very large and noticeable on inspection. The man was close to death. The palliative operation of posterior gastro-jejunostomy was done, from which an uneventful recovery was made. The patient before operation crying for food, which could not be retained, dying as much from the lack of food as from his cancer; after operation ate anything and all he wanted, without one pain or any discomfort, and in eight weeks gained twelve pounds.

Let us for a moment look at the anatomy of the stomach as it relates to malignant disease.

In the first place it is a well established fact that the majority of carcinomata of the stomach at first grows slowly. The stomach walls seems not to be susceptible to rapid infiltration. The pyloric orifice is the seat of malignant disease in 60 per cent. of malignancy of the alimentary tract, in 80 per cent. of cancer of the stomach proper.

The lymph system is of all importance in dealing with any malignant disease. The lymphatics of the stomach, as worked out by Cuneo, shows up one or two important facts. First, the lymph channels and glands lie in the layers of the peritoneum, going to make up the gastro-colic and gastro-hepatic anastomosis, and are very accessible and easy of removal, and too, the glands on the lesser curvature are contained in the stomach wall and the chain is broken a little short of the junction of the oesophagus and stomach. Hence it is that if, as is the case in all favorable cases for operation, the stomach is removed through a line running from this point on the lesser curvature, down to a point beyond the glands involved at the greater curvature, the infected area is well removed through a line running from this point on the lesser curvature, down, to a point beyond the glands involved at the greater curvature, the infected area is well removed, and only a portion of the stomach resected. In fact, it is stated by some that, owing to the formation of the lymphatic, along the lesser curvature, this portion of the organ should always be removed. The chain on the greater curvature ceases at about the junction of the two vessels here located.

The anatomy of the stomach thus teaches us that malignant disease can be more thoroughly removed than is the case in most other portions of the body.

It is pertinent here to ask if these unfortunate cases of carcinoma of the stomach should not be given the same consideration by the physician as is given to malignancy elsewhere? I feel that many of you would say "yes," and I am sure that only a few years will roll by before this will be the established rule. Why not extend to these patients the same help as we extend to

others. Carcinoma of the breast often comes to the surgeons; cancers of the cervix and uterus are frequently operated upon; malignancy everywhere is attacked radically. In no part of the body is there a better opportunity to thoroughly eradicate these growths than there is in the stomach.

On the general practitioner much depends for early diagnosis, and early operations are going to give us best results, and will surely lead on to the brightest plains of surgery.

What is the favorable case, and how determined? Briefly, this: Given the patient of proper age for malignant tendencies, be suspicious of the constant complaining of such symptoms as could be called the various forms of dyspepsia; determine the digestive powers of the stomach, its motor functions, and if, under proper care after the use of the clinical laboratory as an aid to your diagnosis, the patient still goes on worse or not improved, be more suspicious. Above all, if you elicit a history of a previous gastric ulcer, beware, for it is estimated that as many as 50 per cent. of the cases of gastric cancer give such history, even though the ulcer antedates some twenty or thirty years; and, at last, if still in doubt as to whether or no a malignant disease is going on, resort to exploratory operation. Do not wait until a tumor can be distinctly felt or ever seen, for true it is that the more easily recognized is the tumor mass by palpation, the less favorable is the case for radical cure.

Here is a most important sphere where the clinical laboratory will aid you. Let me impress, however, that exploratory incision should be made, not to confirm but to make the diagnosis.

What of those hopeless cases, those cases where the outlook is certain death in all its horrors, where the patient dies of malignancy, of starvation and in agony? It seems to me that here is a work, too, for us, and if, with little risk to life already beyond the counting of a risk, we can relieve these sufferers, can again allow them the pleasure of eating without pain, can cease the suffering, and give comfort, can give a little longer lease of life, truly it is our duty to do so. Such can be done by proper drainage of the stomach through the establishment of a posterior gastro-jejunostomy. Such an operation is feasible, is just.

This view is held by men who are pioneers in this work. If it has been your fortune to see, as I have, its results, then you could but be staunch in its favor. Dr. Blake, who is doing such excellent work in this line, said to me regarding this procedure, "I believe in gastro-jejunostomy as a palliative procedure in pyloric cancer, and find that it gives about four months of freedom from symptoms and then the patients die quickly of their disease."

As regards the technique of operations

upon the stomach, little have I to say. First, bear in mind that the stomach allows of much severe manipulation without causing any untoward symptoms afterward. That a patient can be given little anesthetic, for during operations the work upon the stomach causes no distress.

Regarding technique, allow me to say that I think the mechanical appliances should be abandoned and anastomoses accomplished by suture alone.

Since writing this paper I was pleased to find that Moynihan states in his last work that mechanical means should be discarded. True they have been a great step, and an aid in anastomatic operations; have made surgeons bolder and led the way back to sutures because sutures now perfected seem best.

In performing posterior gastro-jejunostomy, I have made it a point to unite the layer of the gastro-colic omentum firmly to the posterior wall of the stomach by interrupted suture, and carrying a continuous suture over the openings in the stomach and intestine, with the view of a firmer union and also preventing any spur formation. This additional suturing requires so short a time that the operation is not prolonged. The approximation of the gut to stomach, I believe, should be just far enough from the beginning of the jejunum as not to cause any stretching, but not far enough to cause a loop of jejunum to hang down loosely.

The operation of partial gastrectomy needs no comment, except to say that by the improved methods of Billroth, so finely outlined by Mayo in Jour. Am. Med. Assoc., it can be practically bloodless.

Let us look at statistics:

80 per cent. of carcinomata of the stomach are at the pyloric region and lesser curvature.

10 per cent. in the walls.

10 per cent. at the cardia.

Thuh 90 per cent. are amenable to direct attack by the surgeon.

In the remaining 10 per cent. gastrotomy can, at least, prolong life.

Graham showed that 50 per cent. of gastric carcinomata gave a history of gastric ulcer.

Dowd found in the United States census of 1900, 9,000 died that year of gastric cancer.

In regard to operations:

In Mayo's 100 cases, 14 died; 27.7 per cent lived 3 years; 22 per cent alive and well after three years.

Mikulicz, 100 cases, 37 deaths; Kronleth, 50 cases, 14 deaths; Kocher, 75 cases, 29 deaths.

Each year has decreased the death rate in all stomach surgery, till now partial gastrectomies and gastro-jejunostomies give remarkably small death rates comparatively.

and the release from suffering by these measures, the prolonging of life in comfort of these unfortunates, makes this field of surgery, to my mind, truly a triumph.

In closing, I wish to plead that early diagnosis, when this malignant disease is in its beginning, is of all importance to both the patient and the surgeon, and I want to emphasize the fact that in cases where a reasonable suspicion of cancer exists in the mind of the physician, and, after all, in the first stages of this disease a reasonable suspicion is about as close to a diagnosis as we can come, do not wait, but resort to exploratory laparotomy. Let it be that the diagnosis is made by laparotomy, not the laparotomy made to confirm diagnosis.

"ERGOAPIOL" (SMITH). ITS THERAPEUTICAL INDICATIONS, WITH CLINICAL NOTES.

By C. W. Canan, B. S., M. D., Ph. D.

We desire to call the attention of the medical profession to a new pharmaceutical product possessing valuable therapeutic virtues in many diseases peculiar to women. This remedy is known as "Ergoapiol" (Smith), and since its introduction to the profession it has rapidly gained favor with our best physicians. It is strictly ethical, manufactured from the purest drugs and advertised only to physicians.

It is the result of an original combination of the following remedies: Apiol, ergotin, oil of savin, and aloin, all of which are freed from toxic and deleterious substances. These agents are blended in such proportions as to overcome the powerful irritating qualities of each and raise the tonic properties of all. A glance at the therapeutic indications of these remedies singly will convince the most skeptical of the virtues of "Ergoapiol"—the result of their combination.

Since the days of Jaret, Homolle and Baillot, apiol has gradually grown in favor as a therapeutical agent, but until recently it had one decided drawback, that of containing deleterious and toxic impurities in combination. Recently, through the skill of the never-tiring pharmacist, these have been eliminated, and it can now be prescribed without fear of producing disagreeable symptoms, but with an assurance that its full therapeutical virtue will be realized. Even in its impure state apiol gained considerable reputation in the treatment of nephritis, dropsical effusions, amenorrhea and dysmenorrhea. Its emmenagogue properties have been greatly enhanced by the removal of all impurities. In small doses it now became a mild aromatic stomach tonic; it is also highly recommended in membranous dysmenorrhea. The therapeutical value of

ergotin is too well known to call forth comment here. Combined as it is in "Ergoapiol" it becomes an excellent adjunct to apiol, and adds very materially to the efficiency of the finished product.

All students of medicine are aware that oil of savin is a powerful and valuable stimulant to the uterine system, and is one of the most potent emmenagogues known. It is also a powerful gastro-intestinal irritant, and therefore is seldom prescribed alone. But when combined with certain correctives, as it is in "Ergoapiol," it becomes a valuable addition to the drugs already named—apiol and ergotin.

Since the discovery of the methods of producing aloin from the different brands of aloes this drug has become very popular, and has taken the place of the crude drug to a considerable degree. Aloin enters into almost every emmenagogue pill and mixture. Its value as a therapeutical agent is so well known that it is not necessary for us to speak of it in detail; yet we desire to say that its addition to the drugs in question aids very materially in making "Ergoapiol," so valuable a combination. Being a mild stomach tonic, it aids in overcoming the irritable qualities of the savin; also acting as a hepatic stimulant, freeing the portal circulation and relieving the torpid condition of the lower bowel, it goes a great way toward relieving that condition so often present in diseases of women—pelvic engorgement. These qualities make it an ideal adjunct to the emmenagogues mentioned.

Our attention was called to "Ergoapiol" (Smith) through a reprint from a St. Louis journal. This reprint gave the names of remedies entering into the combination. We at once concluded that this product would be a useful one, and securing a supply we began prescribing it whenever indicated.

The results were even greater than we had anticipated. From the beginning we have kept clinical notes of each case, some of which will be recorded in this article. "Ergoapiol" is a mild, aromatic stomach tonic, anodyne, antispasmodic, and hepatic stimulant. It is also a laxative, an ideal emmenagogue in the full sense of the term, and exerts a decided tonic influence upon atonic conditions of the pelvic viscera. It is indicated to a greater or less extent in all forms of dysmenorrhea, viz., atonic, congestive, obstructive and membranous. In true obstructive dysmenorrhea due to actual stenosis of the uterine canal, to a sharp flexure of the organ, or to the valve-like action of a clot or a polyp it is seldom indicated because this form of organic dysmenorrhea requires either surgical operations or mechanical means to effect a cure. However, good results may be expected from its use after such operations have failed to complete a cure or to relieve the suffering. It is even useful in the form where clots

cause the trouble by their mechanical obstruction, and we have seen its administration cause the passage of a polyp in one patient. Good results may be expected from its use in that form of dysmenorrhea known as membranous, due to an exfoliation of the endometrium in the form of a membrane. In amenorrhea it is far superior in value to any remedy we have yet tried, if the cases are properly selected. Amenorrhea due to taking cold at the menstrual period, or caused by shock, can be relieved with the remedy in question.

This remedy is occasionally beneficial in certain forms of metrorrhagia, after operations to remove fungoid or polypoid growths, or after curetting the uterus. It is a remedy of great value in menorrhagia, especially in that form due to fecal impaction, with torpidity of the liver in persons nearing the menopause. Where this trouble occurs in a plethoric and indolent subject the following plan of treatment will generally be all that is necessary: Begin three or four days before menstruation is due and give one brisk mercurial purge, then follow with "Ergoapiol," one capsule three times per day. If this plan is carried out for several months at each menstrual period, a cure will be the result.

"Ergoapiol" is especially indicated when disturbances of menstruation occur in feeble and anemic women. It should be alternated with some form of iron in such cases.

There is a condition in which the patient's menses are regular as far as time is concerned, but the flow is very scant, exceedingly thick, tarry in color, with an offensive odor. The patient suffers pain and weight in the pelvis and back; is despondent, loses flesh and strength, and may or may not suffer from various reflex disturbances. In this state of affairs "Ergoapiol" will be found a sheet anchor.

Before recording the clinical notes gathered while prescribing the drug under consideration, we wish to call attention to one or two important things before leaving the subject. The first is that form of amenorrhea that is brought about by constitutional disease, such as tuberculosis. In these conditions it is a common occurrence to have women insist on their physicians giving them something to bring on menstruation, thinking that its absence is the cause of their condition, when the fact is, the stopping of menses is only a wise provision of nature to prevent faster decline of vital forces. The course to be pursued is to treat the constitutional disease, and when a cure of the latter has been accomplished, this form of amenorrhea will generally take care of itself. However, when the patient's general health has been restored and the function fails to return, then "Ergoapiol" can be prescribed with good results. Our second subject is that of prescribing emmen-

agogues indiscriminately without regard to the cause of amenorrhea. Women who know or suspect themselves to be pregnant, frequently consult a physician in the hope that, in the attempt to bring on menstruation, he will really succeed in causing abortion. Whovever, under such circumstances, prescribes "Ergoapiol" with the understood purpose of inducing the menstrual flow, is liable to have criminal charges brought against him in case abortion actually does take place, even as the result of something the woman has taken or done herself. Before prescribing "Ergoapiol" in amenorrhea the physician should satisfy himself that pregnancy does not exist, and in case of doubt he should decline the management of the case, unless he can protect himself by securing some trustworthy consultant who will share the responsibility of the case.

ABSTRACTS AND SELECTIONS.

THE MANAGEMENT OF CONVALESCENCE.

In convalescence from acute diseases, such as pneumonia, typhoid fever, acute articular rheumatism, etc., we are face to face with the problem of restoring the weakened organism to its normal condition. The blood shows a state of secondary anemia, the nutrition is lowered, the nerve and muscular tone is below par; the appetite but sluggishly answers our urging, and the digestive powers feebly respond to the demands made upon them.

It is at the dawn of convalescence, when the danger of the illness itself has passed, when the desire to live, to get strong, is highest in the patient, that the physician's reputation often hangs in the balance. Having brought the patient through an illness, many physicians are unfortunately content to rest on their laurels, and to let long-suffering "Nature" do the rest. The wise practitioner, however, knows that Nature is grateful for the proper kind of aid in these circumstances—aid in her efforts to lead a weak organism out of the bondage of illness.

And so, the far-seeing physician will look about in his armamentarium for a drug or a combination of drugs which will restore the blood, the nutrition, the digestion, the assimilation, the appetite, the weight, and the powers of resistance of the sufferer to normal, in the quickest possible time.

Fortunately, nature has provided two chemical elements, iron and manganese, which are as necessary to the system as life itself, and which, when given in the proper amounts and in the proper forms, will carry the patient through convalescence to health. In the delicate state of the digestion of a convalescent it is of the utmost importance

that the forms of iron and manganese administered be such as to become absorbed and assimilated with the least disturbance of the gastro-intestinal organs. The old-fashioned inorganic preparations of iron which still figure in the pharmacopelas of various countries are totally unsuited for this purpose.

The scientific researches of Hamburger, Bunge, and others, conducted during the past twenty-five years have shown the immeasurable superiority of the organic compounds of iron and manganese. The organic compounds alone have been found to be absorbable in such amounts as to produce the desired action on the blood. Of these compounds the peptonate, which is an organic-chemical combination of iron and manganese with peptone in a solution, known as Pepto-Mangan (Gude) is the most readily absorbed, and therefore the most efficient preparation of iron-manganese known, and as such is used with the greatest benefit in convalescent anemias.

A point which is frequently lost sight of in considering the treatment of anemia, is the importance of manganese as a constituent of normal blood, and as an element ranking only next to iron in its power of building blood corpuscles and increasing the life-bearing hemoglobin of these cells.

Campani, an Italian savant, as early as 1872, demonstrated that manganese is found in the red blood cells, as well as in the serum of normal blood, and the more recent researches of Lecanu and L'Heritier show that manganese forms a constant constituent of the hemoglobin molecule. Furthermore, Zaleski (Zeitschr. f. physiol. Chemie, 1904, page 449) showed that manganese enters the molecule of hemoglobin with the same readiness as does iron, and therefore it has the same direct blood-forming power as iron. But, perhaps the most important fact in connection with manganese, is that once having entered the red cell, it attracts iron to the coloring matter of the blood, as the recent investigations of Benedetti have shown (Boll. Scienc. Mediche, Bologna, June, 1905).

A consideration of the above facts will convince any unbiased physician that the preparation known as Pepto-Mangan (Gude) is made on scientific principles, in accordance with the researches conducted by the foremost physiologists and clinicians within the past quarter of a century. It contains a combination of iron and manganese calculated to secure the highest possible blood-building efficiency without in the least interfering with the digestive functions. On the contrary, Pepto-Mangan is an excellent digestive tonic; it increases the appetite and promotes nutrition. Pepto-Mangan (Gude), therefore offers in convalescence the surest, most agreeable, and most prompt road to perfect health.

A NOTE ON THE EFFECT OF BODILY EXERCITION ON THE OPSONIC INDEX OF HEALTHY PERSONS.

G. G. Ellett (British Medical Journal) examined the blood of several men training for a boat race, which gave evidence that severe exercise has some influence in lowering the opsonic index, even in healthy persons, in whom there can be no question of auto-intoxication, as is claimed in the case of the tuberculous patients.

TREATMENT OF INSANITY IN GENERAL HOSPITALS.

D. R. Brower (Jour. of the Am. Med. Ass.) for thirty years has been treating selected cases of insanity in the wards of general hospitals, with success sufficient to justify him in urging this plan on the profession generally. The method used is substantially the Weir, Mitchell rest cure, and the cases specially amenable to this treatment are the autotoxic and exhaustion ones. For the progressively degenerative types the only proper place is the special hospital for the insane. The rest cure should be followed by judicious exercise, congenial occupation, etc. Details of the treatment are given.

PREVENTION OF INFECTION OF THE EYE BY THE PRE-OPERATIVE ADMINISTRATION OF POTASSIUM IODIDE.

Dor (L'Opthalm. provinciale): For the past five years Dor has given iodide of potassium in doses of 15 grains thrice daily for three days before operation, and within this time has operated on numerous complicated cases without the slightest accident. He relates the case of a double cataract in a man, aged seventy, who had, in addition, purulent cystitis, prostatitis and perineal fistulae. The right eye had been lost through operation. Dor gave his usual prophylactic, and operated with the patient in a garret lighted only by means of a bull-eye lamp and in an atmosphere impregnated with the odor of decomposing urine. The result was good.

TREATMENT OF UREMIA.

On the theory that uremia is produced by a toxin, LeFevre advises venesection as the most rapid method of aiding elimination and at the same time of lowering the arterial tension, which is frequently very high. Other measures having the same object in view are the use of means to promote free diaphoresis. For this, hot packs may be used, or hot vapor baths, or, perhaps best of all, electric light baths. Pilocarpine used carefully may cause a diminution of the

symptoms. To aid elimination by the intestine, colonic irrigation may be used. On account of the vomiting which is frequently present, the saline cathartics may not be retained, but the compound powder of jalap in dosage of one-fourth to 1 drachm is usually well taken. Elaterium one-tenth to one-sixth grain, or elaterin in the same dosage may be given every three or four hours until free catharsis is produced. Many believe the mercurials to be the most beneficial of the cathartics, but care should be taken to see that free catharsis is produced, as otherwise in chronic nephritis salivation from the absorbed mercury is very likely to follow.

To secure free diuresis is sometimes difficult, as in uremia there often seems to be a direct inhibition of the kidney. The members of the caffein series are best tried and they often act better if given in connection with some of the members of the digitalis group.

The uremic convulsions are best controlled by the use of chloroform and chloral. If it is desirable to lower the arterial pressure rapidly, recourse may be had to venesection, or to free catharsis by croton oil. The action of the nitrite series is quite transient.

TREATMENT OF CIRRHOSIS OF THE LIVER.

M. Gaston Lyon (Jour. de Med. de Paris), in writing of the treatment of alcoholic cirrhosis, recommends in the first place an absolute milk regimen in the beginning of the treatment. Later a mixed diet may be allowed—eggs, potato puree, peas, beans, rice, tapioca, etc. In patients with hypopepsia, kefir or other kinds of fermented milk may be added. Saline purgatives in small doses are to be recommended. Calomel is of value and sodium salicylate advisable. Among the recommended formulas are:

- R Sodi benzoatis, gr. lxxv.
- Strychninae sulphatis, gr. ss.
- Aquae des., ʒx.
- Two drams daily.
- R Sodii benzoatis, gr. v.
- Sodii phosphatis, gr. x.

In cachets; two cachets to be taken after meals.

If the ascites is marked, the author prescribes an absolute milk diet, drastic purgatives, scammony associated with squill and digitalis or with theobromine.

Italians of the poorer class are noted for their general good health. This is to some extent attributed to the fact that the working people of Italy eat less meat than those of any other European nation.

MEATOX.

Meatox is a concentrated nitrogenous food made of pure lean beef. It is absolutely free from preservatives, and it keeps indefinitely even in unsealed containers.

Meatox is different from the so-called meat juices or meat extracts in that it contains all the nutritive elements of beef—namely, assimilable proteids, which are the nutrients, whereas the meat extracts merely represent the stimulant parts of beef.

Meatox is of pale yellow color, possessing a faint odor of meat and an agreeable flavor imparted by celery seed. In this respect it is superior to the extracts of beef which possess a strong and peculiar odor and, being merely stimulants, do not contain the nourishing elements the patient's case requires. Meatox, contains from 73 to 75 per cent. of proteid matter which is readily assimilable.

Whereas, good lean beef contains from 16 to 20 per cent. of proteids, and meatox on the other hand contains from 73 to 75 per cent. of proteids, one pound of meatox contains the nutritive substances (proteids) of from 4 to 5 pounds of lean, boneless beef, or about 10 pounds of ordinary butcher's meat with the bones and fat. The presence of this high percentage of proteid matter commands the use of meatox as a dietary necessity to the discriminating physician.

Meatox can be eaten mixed with cereals or vegetables, milk, broth, etc. Almost every form of food can be prepared with meatox. It should be prepared at a temperature not exceeding 120 degrees F. to avoid cooking it.

Soldiers or sailors in service can be fed with 3 ounces of meatox per diem in connection with cereals, cooked green vegetables, etc. In all cases the best results will be obtained if meatox is taken in its original condition after which the patient should drink some water or milk to wash it down.

A few trials will convince discriminating physicians that meatox will be tolerated by most dyspeptic patients, when taken in its original granulated form, ½ ounce every five hours (5 teaspoonfuls of meatox represent 1 ounce by weight). No less can be said in favor of meatox when employed in the treatment of diabetic patients. Here the patient needs a large amount of proteid matter to repair the waste of economy and without overtaxing the patient's stomach. Three ounces of meatox will supply him with all the nourishing quality of meat. This fact of its being borne and assimilated by delicate stomachs is of the utmost importance.

Physicians during their summer vacations will find meatox the best addition to their outfit. It can be eaten on buttered bread or toast presenting a veritable *miltum in parvo* of nourishment.

THE NEW ALBANY MEDICAL HERALD.

OCTOBER, 1907.

Old Series Vol. XXV, No. 322. New Series Vol. XIV, No. 193

GEO. HANLON DAY, M. D., Editor.

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EDITORIAL.

PREVENTIVE MEDICINE.

One of the most important duties of State Board of Health is its sanitary work, especially in preventive medicine. Much of this is founded upon and dependent upon vivisection. For example, the production of an absolutely reliable diphtheria antitoxin depends absolutely upon it, as it must be tested upon animals and some of these must die in order that our babies may live.

Massachusetts has supplied free antitoxin to the people of that commonwealth for ten years and the mortality which was formerly 33 per cent. has been cut down to a little over one per cent. in all cases in which it is used on the first day of the disease.

The Illinois State Board of Health in its Bulletin says it is committed to this same project and proposes to introduce at the present session of the legislature an amendment to the antitoxin law and it is important that

nothing may be done to interfere with the beneficent work which is primarily for the protection of the public health. It is estimated that this will save the people of the State nearly one hundred thousand dollars annually.

We have a national pure food and drug law passed by Congress last winter and a bill of similar import is to be introduced in the General Assembly at the present session by Senator Campbell. The satisfactory execution of these laws will be possible only by means of experiments upon animals; otherwise, instead of experiments upon animals, dishonest tradesmen will be permitted to inflict suffering, possibly death, upon women and children.

That successful vaccination is an absolute protection against smallpox, no well informed, right thinking persons can deny. Every particle of vaccine is the result of a vivisection. Do you wish smallpox to become a scourge and have every third person you meet pock-marked and have it kill its thousands? If you do, then put an end to vivisection. Tetanus or lockjaw may now be prevented by the use of antitonic serum prepared by vivisection. Rabies has been robbed of its horrors by the same means.

Since the discovery of general anesthetics, ether and chloroform, no other event has so profoundly influenced medical practice and teaching, as the realization by the medical profession of the tremendous importance of the theory of bacterial infection, and this has been rendered possible only through the practice of vivisection. Besides those I have named, I might mention surgical fever, anthrax, hospital gangrene, pyemia, glands, puerperal fever, malignant oedema, actinomycosis (lumpy jaw), bubonic plague, together with malaria and yellow fever, referred to elsewhere, have each and every one become better understood and rendered more amenable to treatment, more easily and readily diagnosed, more certainly prevented by reason of our increased, improved knowledge directly due to the study of the specific germ, and animal experimentation.

The necessity for the use of animal experimentation either by the State, the municipality, the hospital, in the diagnosis of any of the above diseases, arises when the best methods are appreciated and employed. If vivisection is interfered with, it will probably very seriously interfere with the research which is now being carried on in an attempt to discover the cause of that scourge of mankind, cancer. These researches will be carried on here and legally, if may be, but they will go on until a successful ending is reached, when, no man can tell. "No man or group of men can successfully either stop or turn back the wheels of progress nor permanently hide the face of truth and it should be the everlasting disgrace of any one who attempts it."

"These hostilities to public health are but play to the galleries. It is the drama of sentimentality. It is pretense. It is the ignorant sentimentality that would spare the dog at the expense of the innocent babe, that would sacrifice these flowers of the human race for the sake of a dog, a frog or a rat."

"Let us be courageous, persistent, faithful and righteous in the practice and promulgation of truth so incontrovertibly established, for the Lord of creation will surely hold civilized and Christianized mankind accountable for the right use of the knowledge he has given them."

ERYSIPELAS.

This disease, sometimes known as Saint Anthony's fire, has been recognized from the earliest times; Hippocrates described it and treated it successfully. It is endemic in most large cities, but as a rule the cases are scattered and not especially numerous. Epidemics are observed from time to time in hospitals and prisons, particularly in those institutions where the sanitary arrangements are defective. In the past there have been great epidemics of the disease which spread over entire countries and continents.

The disease is contagious and is also inoculable. It can be carried by a third party, as has unfortunately happened in several instances where a physician after attending a case of erysipelas has visited one of child-birth and infected both the mother and the child. Women in this state seem to be especially liable to this malady, and with them it is a very serious disease. Those who have just undergone surgical operations are also prone to contract erysipelas. Habitual alcoholism, Bright's disease and debility of any kind strongly predispose one to this infection. As a rule the point of entrance can be found in some wound or slight abrasion of the skin, but cases do occur in which no such a place can be found.

The disease is due to a streptococcus, a small, round microbe which grows in lines or chains. When found in erysipelas it is sometimes called the streptococcus erysipelatos, but it appears to differ in no essential respect from the streptococcus which is found in boils, carbuncles and other pus accumulations, and is ordinarily called the streptococcus pyogenes. In common with other bacteria its degree of virulence is quite variable, but the streptococci are all dangerous and all cases of infection by them must be treated with respect.

In the ordinary form of erysipelas the germ is found in the lymph spaces and vessels of the skin. The neighboring lymphatic glands are swollen and there is a considerable degree of systemic disturbance. The case is generally ushered in by a chill, af-

ter which the fever rises rapidly and high. The temperature remains high for four or five days and then often falls by crisis. There may be a slight return of temperature after the patient is apparently well. As in other infections we find headache, pain in the back and limbs, loss of appetite and constipation. The nervous disturbance is often apparently out of all proportion to the fever; the liability to delirium is marked.

As the disease is such a common one a description of its appearance is hardly necessary. To distinguish it from some other diseases, however, the following points should be kept in mind; it is always accompanied by fever, and the patient feels distinctly sick; the affected area is raised and the border is abrupt, the outline is irregular; as a rule the skin is of a very angry red color, although there are some rare cases in which it is pale. Very commonly the cuticle is raised by blebs of various sizes.

There are cases of dermatitis which may be mistaken for erysipelas. We once saw an inflammation on the backs of the hands of a locomotive fireman on which the skin was dark red and puffed, and there were many blisters. In this instance the diagnosis was made of dermatitis because it occurred on both hands simultaneously, the color was darker than erysipelas usually is, and the border of the eruption shaded off gradually into healthy skin. The heat of the fire-box and of the sun, and the irritations of the coal dust, were supposed to be the cause of this case; it got well promptly under mild antiseptics and protection.

Another affection which has in some cases been mistaken for erysipelas is acute necrosis of the bone; this may occur at any point, but is commonest in the bones of the leg.

The disease known as phlegmonous cellulitis in which the subcutaneous cellular tissue is inflamed and suppurates is closely allied to erysipelas. The streptococcus is the causative agent, and the principal difference is in the location of the disease. This affection may destroy the blood vessels which nourish the skin to such an extent as to produce sloughing over large areas. The formation of pus is almost certain and the skin over the affected part must be opened very freely. In some cases of ordinary erysipelas there is pus formation, producing abscesses and ulcers which scar and disfigure the patient for life. The only remedy for this is to prevent the disease from going to this extreme length, which is accomplished by beginning from the very first a vigorous and judicious treatment.

Innumerable remedies and systems of treatment have been used to combat erysipelas. The oldest one of which we have any knowledge is the practice of keeping the part covered with cloths wet in cold water. This allays to some extent the itching and burn-

ing so that the patient can rest in comparative comfort. In mild cases where the vitality and resisting power of the patient are unusually good this treatment answers very well. Unfortunately, such subjects rarely contract the disease, and some more efficient application must be sought.

In the days before the theory of antiseptics was understood a good many of them were used empirically. Among the most efficient of these are the balsams, which have been deservedly popular remedies from the earliest times. In the light of present knowledge we now see the reason for their success, and can also make more scientific preparations of them. One of the most useful balsam compounds is resinol, and in erysipelas it is practically a specific. It should be applied freely and changed about twice a day. The application should extend at least two inches beyond the apparent edge of the disease in order to overcome the streptococci which have advanced into the outlying lymph channels. Its analgesic qualities allay the pain and it is perfectly harmless.

TRAUMATIC EPILEPSY.

When inquiring into the history of epileptic cases it is very common to learn that the parents of the patient attribute the disease to a fall or some other injury which has been received. In the vast majority of cases such a theory can not be proven. The mere fact that the patient has received a wound on the head and has subsequently developed epilepsy is not of itself sufficient to prove that the disease is a direct result of the injury.

In some few cases, however, a casual relationship may be made out fairly clear. For instance, if the patient has received a severe wound on the left side of the skull over one of the well-known motor areas of the brain, and the epileptic attacks always begin in the group of muscles controlled by this area, then there is a very strong probability of such a relationship. When there is a scar on the scalp resulting from an injury and pressure on this scar always brings on an attack of epilepsy, then again the case is fairly well proven.

A case reported by Briggs illustrates very strikingly the liability to error in cases of this class if one jumps at conclusions without the most thorough investigation. His patient had an old depressed fracture of the skull and also a necrotic process in the tibia. Her epilepsy was naturally attributed to the Skull lesion. The surgeon began treatment by operating on the leg, which was healed in due time. The fits ceased, and although he kept her under observation for five years they never returned; the skull was not touched.

It may happen that merely the presence

and irritation of a scar in the scalp will produce and keep up the epileptic attacks. Merely cutting out the scar under aseptic technique, so that the scar resulting from the operation shall be as small as possible has in some instances entirely relieved the patient of his disease. We can never tell, however, what we are going to find when we incise the scalp. The skull must be examined very carefully. If there has been a former fracture, and if there is any reason to suspect the presence of a depressed fragment the skull should be opened. In other words, when we determine to operate at all we should be ready to do a complete operation if conditions show this to be necessary.

There are cases in which the outer table of the skull is apparently uninjured while the inner table is splintered and spicules of it are driven inward. After many fractures of the skull projections of the bone develop, called exostoses, which grow inward and press upon the brain. The dura must be detached and these exostoses trimmed off completely.

In all cases where the skull is opened the dura should be opened likewise. If the operation is done under strict precautions to secure asepsis there is very little additional danger in this measure, and we may gain valuable information by inspection of the brain. A large and thick scar of the dura should be cut out; scars in the brain substance must also be removed entirely. It is better to remove too much of the brain matter than too little, for if part of the diseased structure remains we shall have a return of the epilepsy, and the dangerous and difficult operation has been done for nothing. As the centers in the brain for the most part extend in a horizontal, or antero-posterior direction, it is better to take out any extra tissues in this line than in the vertical one. In the latter case there is danger of injuring some other neighboring center. If the substance of the brain is seen to be the subject of fatty or other degeneration it must be removed down to the white matter. The latter need not be disturbed unless it contains a scar or a tumor.

Cysts are frequently found just within the skull; these are usually the result of former hemorrhage. Tumors of any kind must be removed when practicable. If the tumor is found to be too deep or too large to remove the operation must be stopped and the wound in the scalp closed without replacing the bone. This lessens the tension and will temporarily give relief.

During operations on the brain hemorrhage must be avoided as far as possible. Large veins can be ligated before division, and in many instances they can be merely lifted out of the way and then replaced after the work has been finished.

No antiseptics can be used on the sub-

stance of the brain; styptics, also, are too irritating. Hemorrhage must be controlled by ligating the bleeding vessels, hot water may be applied and slight pressure exerted. When the operation is completed and the bleeding controlled the dura may be stitched with fine catgut, and the scalp wound closed. Except in septic cases no drainage is necessary.

The after-treatment consists in rest in bed and the administration of some drugs to hasten the absorption of the blood and to make the resulting scar as small and soft as possible. Heretofore the iodides alone have been relied upon for this purpose, but the addition to them of some other drugs, as *stillingia*, *helonias* and *saxifraga* greatly enhance their power. A very excellent preparation of this kind is known as *iodia*. The iodide of potassium when given in the form of *iodia* need not be administered in such large doses as are ordinarily necessary, so that the stomach is saved much irritation. The results obtained are very satisfactory indeed.

For some weeks following an operation on a motor area of the brain there will be complete paralysis of the muscles which these centers control. Gradually, however, the power of movement will return, probably because the corresponding center on the opposite side takes up the function of the one which is lost.

It is a strange fact that even after slight operations, and some which are entirely useless, the epileptic attacks will often cease for a long time. We must be very guarded, therefore, and not be certain of a cure until the patient has been under observation for at least three years. Even when a complete cure is not obtained there is often a decided amelioration of the disease, and in this distressing malady even a partial relief must be accepted gratefully.

HUMAN EXPERIMENTATION.

We resent with indignation the insinuation that we, as physicians, are less human than our critics. We repudiate the inference which every attempt to resist vivisection implies, that physicians are degenerate and cruel and actuated by inhuman motives. Indeed we go farther than this and claim that our humanity is of a higher order than theirs for we want all of this work done in the interests of animals as well as of men, and furthermore, ours is the only profession whose members have offered themselves and use themselves in experiments for the good of humanity. In this connection and before detailing these experiments in human vivisection with their results, permit me to offer two quotations, the first from the president of Harvard, and the second from Prof. G.

Stanley Hall. President Elliot says, in discussing vivisection before the General Assembly of the commonwealth of Massachusetts: "The humanity which would prevent human suffering is a deeper and truer humanity than the humanity which would save pain or death to animals."

"The progress which has been recently made in medical research is one of the most extraordinary achievements of the nineteenth century. Such research is absolutely the most humane of occupations, because it has prevented human suffering and death on a great scale, and because it promises to achieve in the future still greater triumph over pain and death."

Prof. Hall says at the same hearing: "All the traditions and all the arguments and all the educational tendencies toward the development of sympathy for life are not on the side of the petitioners, but upon our side. The attitude of the medical profession toward humanity, as well as toward lower animals, may well challenge comparison with any other profession or class of men in the world. Our motives are humanitarian to the core."

The two most notable examples of human experimentation to which the physicians voluntarily submitted themselves, knowing full well that the results might mean death, are in connection with malaria and yellow fever.

In 1900, Dr. L. Sambon and Dr. G. C. Law, both connected with the London School of Tropical Medicine, volunteered to live from June until October in a part of the Campagna near Ostia, the great malarial Roman swamp, which is so infested with malaria that no one who spends one night there under ordinary conditions escapes the disease. They volunteered to live in a mosquito-proof hut, in this veritable valley of the shadow of death for two months, in order to prove that the mosquito is the intermediate host and that the sole means of conveying malaria to human beings is by means of the bite of a mosquito which has previously bitten a patient sick with malaria, thus paving the way for rational preventative and curative measures.

The editor of the Illinois State Board of Health Bulletin says:

"It is with special pride that I speak of the work of Walter Reed, major and surgeon, and Dr. Jesse W. Lazear, who, with Major Gorgas were members of the yellow fever commission which was sent to Havana during the Spanish-American war to investigate and, if possible, to determine the cause of yellow fever and the means by which it is spread. Previous to that time, yellow fever caused from 500 to 1,000 deaths annually in Havana alone and had been doing so for nearly 200 years. It frequently visited the Southern States, caused thou-

sands of deaths annually and a vast amount was spent in useless ineffectual quarantine. As a result of their work it has been definitely and positively determined that yellow fever is not contagious and that it is conveyed only by the mosquito, and the island of Cuba which has been scourged of this dreadful malady for 200 years has been almost freed from it. Not only Cuba, but the Southern States have been relieved of a danger which constantly threatened and visited them, inflicting enormous and serious loss of life. As a result of their work, a multitude of lives have been saved, more indeed than were lost in the Spanish-American war; a pestilence has been robbed of its terrors and an annual expenditure of millions of dollars shown to be unnecessary and useless.

"At a recent meeting of the Conference of State and Provincial Boards of Health, it was unanimously resolved, 'That the sanitary redemption of Havana is regarded as one of the most brilliant achievements in the application of sanitary science to public health work ever accomplished.'

"Dr. Reed was one of the greatest benefactors of his race, and one of the greatest adornments to the medical profession. The results of his work are of the utmost benefit to mankind. His work even to the United States alone for the future means a saving in life and treasure that is cheaply paid for by the whole cost of the Spanish-American war. The war cost treasure and blood, but Dr. Reed's discovery is an adequate recompense for both. Dr. Walter Reed is dead; and while he did not die of yellow fever, yet he freely and unhesitatingly took the chance of doing so notwithstanding that he was a sufferer from organic disease of the heart and so unable to obtain any life insurance.

"Dr. Jesse Lazear died of yellow fever in Cuba, September 26, 1900. Dr. Lazear entered the medical department of the army early in 1900 as an assistant surgeon. He was at once assigned to duty at Quemados, Cuba, and was made a member of the commission appointed to study yellow fever, and placed in charge of a laboratory at that place. I can best describe his work by quoting from a letter sent by the chief surgeon of the department of Western Cuba to the surgeon general of the United States army:

"He says: 'Dr. Lazear has, for the past four months exposed himself with absolute fearlessness in the discharge of his duties. He has examined the blood of every case of yellow fever which has occurred at the Columbia barracks during that time. Has immensely aided in prompt diagnosis which have been so important an element in the art of preventing the spread of the disease and in our success in the treatment of our cases. In the investigations of the board, he

has shown the same courage, earnestness and ability which characterized all his work. Dying of yellow fever at the age of 34, he leaves a wife and two children, the youngest of which he never saw, as his son was born in the United States while he was in Cuba this summer."

Monuments and eulogy are for the dead, but no human speech can add anything to their fame, augment the gratitude, the grateful homage, the speechless reverence which should be given, and which we here offer as the loving tribute of a grateful profession to those dead defenders of a great nation, the martyrs of medicine.

"Congress has granted to the loving kin of Reed and Lazear, a miserable pittance in the way of a pension, and a monument was erected to Dr. Reed, but no Act of Congress can make restitution for so great a sacrifice; no recompense can reach them. Humanity and time remain their everlasting debtors. They who had so often listened to the morning and evening gun, the daily salutation to the flag, that grand old flag which had been so interwoven with the dearest memories of their lives and colored all their acts with its lasting blue of true fidelity, they had been challenged by the deadliest unseen foe that ever lurked in the mire of a Southern swamp. The world can scarcely know how brave they were; and yet they never knew defeat, they never shall.

"While at the post of duty, just at a time when life was full of promise, when the tide of life was at its full, when the sunshine of hope and success was shining all around them, when the wreath of fame was almost within their grasp, when death seemed almost unnatural, it came in all its hideousness. There was not mere bravery but true courage, real heroism, more sublime even than the courage of the noble men who manned the Maine.

Meanwhile a patient and a patriotic profession, enlightened by the lessons of history, the woes of the war, forgetting not the ingratitude of the republics and anti-vissectionists, offer our own little tribute to these heroes of ours, swearing allegiance anew, taking new heart, ready for greater sacrifice, for nobler aims, for better service.

"The tumult and the shouting dies,
And the captains and the kings depart,
Still stands Thine ancient sacrifice,
An humble and a contrite heart.
Lord God of Hosts, be with us yet,
Lest we forget, lest we forget."

NEPHRITIS.

It is hard to say that any one of the principal organs is more essential than another, for they are all necessary to life, but the kidneys are of prime importance. In order to realize this we have only to recollect how

quickly life ceases when the kidneys fail to act. Fortunately it is very rare indeed that these organs cease their function suddenly and completely, but in some instances of violent inflammation they do so, and the patient then survives only a few hours, a day or so, at most.

As a rule inflammations of the kidney are rather slow in their course and in the majority of cases it is very difficult to know whether we are dealing with a process which is chronic in its nature, having acute exacerbations, or a series of separate acute attacks. In most instances, also, the microscopical study of the organ reveals the fact there is rarely a clear line between inflammation and degeneration of these organs. This is probably because the poisons of the body are constantly passing through the kidney cells, and this would naturally tend to produce degeneration. There is always, however, a greater or less amount of inflammatory material, round cell infiltration, deposited in the organ.

The old discussion as to how and where the various constituents of the urine are excreted still goes on as actively as ever. After years of experiment and theorizing the best authorities admit to-day that there is hardly a single point in this whole subject that has been definitely settled. Where the urea is first formed no one knows, probably all over the body.

In all text-books nephritis is divided into four principal kinds, acute and chronic parenchymatous and acute and chronic interstitial. In the parenchymatous varieties the disease commences with the essential secreting cells of the organ, and in the interstitial the process is concerned primarily with the connective tissue. Of the secreting cells there are two main divisions, those of the tufts within the glomeruli and those which line the tubules. These two sets of cells probably have quite distinct functions: the watery constituents and the dissolved salts are thought to be secreted in the glomeruli, and the other ingredients by the cells lining the convoluted tubules. There are some diseased conditions in which the glomeruli suffer almost exclusively, and others in which they remain comparatively healthy while the cells of the tubules are attacked. At the bedside, however, we have not yet learned to make these distinctions, so that they are of little practical importance.

Some degree of nephritis is nearly always present in infectious diseases; in some of these it may depend upon the presence of the actual bacteria in the blood, in others it is the poisonous products of bacterial life which cause the irritation, while in all cases the blood is altered in composition by the high fever and increased tissue changes which accompany it. Poisons taken in as such from without are largely eliminated by the kidneys, and injure them to a greater or

less extent; among the most frequently encountered are cantharides, turpentine, phosphorus and lead. They produce changes of various degree, depending upon the amount taken and on the rapidity with which they are thrown upon the kidney. The result may be anything from hyperemia to severe inflammation and degeneration.

Acute parenchymatous nephritis often occurs in those patients who are already suffering from some such constitutional disturbances as gout, jaundice or diabetes. It is brought on by any of the above mentioned causes, the infectious fevers or extraneous poisons.

When examined post mortem the kidneys are sometimes apparently almost normal, for the poison has overwhelmed them suddenly, not allowing time for any great structural changes. In most cases they are swollen, soft and full of moisture, quite red in color; the capsule is smooth and easily removed. Upon section the outer or cortical portion is found to be pale while the central medullary part is red and congested.

The microscope reveals the fact that a large proportion of the cells lining the glomerular capsules and the convoluted tubules have been loosened and lie free in the tubes. The cells remaining attached to the walls show by the condition of their nuclei that the process of regeneration is also taking place. This is of the greatest importance, for it is by this means that the organ can recover completely even after a very bad attack of this disease.

In most cases of chronic parenchymatous nephritis the organ is large and pale, although in very long continued cases a certain amount of atrophy follows, making it smaller and its surface more or less irregular.

Acute interstitial nephritis is often produced by extension of inflammation from the pelvis of the kidney to the organ itself, but is usually caused by such violent infections as diphtheria. In the latter class of cases the microbes enter the kidney through the blood vessels, and lodge in its capillaries, setting up many foci on inflammation and suppuration. Upon their number and virulence depend the amount of damage done.

Chronic interstitial nephritis is characterized clinically by a great quantity of pale urine, with very little albumin and few tube casts. It consists of a gradual increase of the connective tissue of the organ which slowly compresses and crowds out the secreting cells. The kidney as a whole is small and rough. This is the form which is often observed in chronic alcoholism and lead poisoning.

The treatment of nephritis consists, first in attempting to stop the irritation which causes it, and then in regulating the blood supply of the organ so that proper elimina-

tion can be maintained. The infectious diseases do not last long, and the kidney is spared much damage if the bowels and skin are kept active, for a large proportion of the poisonous matters can be eliminated through these channels. Drinking plenty of water dilutes the harmful matters in the blood so that they are thrown upon the kidneys in a less concentrated form and do not injure them so much.

In chronic cases we need to stimulate the organ to action, and in order to do this we must increase the blood supply. For these purposes heart stimulants and mild diuretics are indicated. A combination of the most efficient drugs of this class has been put upon the market under the trade name of anasarcin; its results are very excellent indeed, especially in those cases accompanied by dropsy, or even general anasarca. In acute cases small doses should be given, as a rule, and in chronic ones large doses; but these details depend upon many circumstances, and must be left to the judgment of the physician in each individual case.

Abstracts and Selections—Continued.

DR. W. B. FLETCHER FOUNDER'S DAY MEMORIAL.

Founder's day was observed Sunday Aug. 25 at "Neuronhurst"—Dr. W. B. Fletcher's sanatorium—and the exercises were in the nature of a memorial service for Dr. William Baldwin Fletcher. Many of Dr. Fletcher's friends and relatives participated, and a number, who could not be present, sent letters. The sanatorium was prettily decorated.

Miss Mary T. Wilson, a member of the board of trustees, presided, and Dr. E. V. Green, of Martinsville, made the principal address, laudatory of the life and work of Dr. Fletcher.

Letters were read by Dr. Urbana Spink from James Whitcomb Riley, Clark Bell, president of the American Medico-Legal Society, and others who were prevented from participating in person.

A NEW EXTERNAL HEMOSTATIC.

Schadel (Int. Therap.) speaks well of the use of potassium permanganate as a hemostatic which was recommended recently by Vorner. The remedy was first applied in powder form mixed with charcoal in the proportion of three to one, but it was later found more convenient to use it in the shape of a paste. This may advantageously be prepared by the addition of about 4 per cent. of vaseline. It has been used with good success in all forms of parenchymatous hemorrhage such as follows the excision of condylomata, warts, etc. It has also been

found of value in nasal hemorrhage and in lupus. The hemostatic is applied by carefully drying the spot in question and then pressing some of the paste directly onto the bleeding surface. Slight burning is caused, but the sensation is not very painful.

MEDICAL GLEANINGS.

The man who measures a doctor by his financial returns, should be arrested by the city sealer for using crooked scales.

Progress in drug therapy lies in the way of studying the action of single drugs, given with clear expectation of the results to follow.

Before operating for enlarged tonsils or adenoids it is advisable to thoroughly cleanse the nose and cavity of the mouth. Such care is particularly necessary if the patient has carious teeth or stomatitis.

Most of the State laws providing for licensing irregulars explicitly deny them the privilege of prescribing or dispensing drugs. Here is our opportunity. Make our one remaining exclusive privilege the leader.

Many times the best results are not produced by Bryonia because it is given in too large doses. Bryonia, gtts. iij to gtts. x. in aqua, $\mathfrak{z}\text{iv}$, given in 31 doses every hour, will produce effects that can not be obtained from the large doses, especially in pleurisy or pneumonia when effusion has taken place.

A diagnosis between a tumor anterior to the rectus muscle and a tumor more deeply seated, can be made by grasping the tumor and then having the patient rise from the recumbent to the sitting posture. Tumors anterior to the rectus muscle do not escape from the grasp of the fingers during this maneuver, while tumors behind the muscle can not be firmly held.

W. C. Braislis, Brooklyn, reports four cases of epithelioma of the ear in a woman aged forty-eight and three men aged respectively seventy-one, seventy-five and eighty years. He prefers partial or complete amputation to cauterization. He gives brief histories and photographs of his cases. He comments especially on the extremely slow course of epithelioma of the ear; one of his cases was stated to have existed for thirty-five years.

A. Hall declares that the circulation, like any other system of pipes and tubes, may become deranged, plugging or embolism being one of the possibilities. This lesion is favored by the variation in the diameters of the vessels. It is also dependent upon a pre-existing morbid condition, which pro-

duces in the blood stream a substance which can not circulate. The locus in the circulatory system where the embolus occurs depends upon the size of the latter; and with regard to the embolus the circulation may be divided into: The part extending from the systemic venules to the pulmonary arterioles; another from the pulmonary venules to the systemic arterioles; and a third from the gastro-intestinal venules to the interlobular portal venules. These three parts are separated by impassable capillaries. There are two types of embolism: Multiple embolic aneurisms, which originate from valvular vegetations of the left heart associated with rheumatic or infective endocarditis and which are rapidly fatal if they attack the intracranial vessels; and pulmonary embolisms which usually begin as thrombi in the systemic veins, death occurring suddenly and without premonition.

The method adopted and recommended by G. E. Shoemaker, Philadelphia, for fixation of the movable kidney, consists in imbedding the kidney in the substance of the fatty cushion and thus giving it at least some support on its abdominal side. The kidney is delivered endwise through a hole made in its capsule, which is torn off from the organ around to the vessels. To prevent it from slipping back into its former loose bed, two chromicized catgut mattress sutures are introduced below each pole of the kidney into the fatty capsule in such a way as to close up the buttonhole through which it came out. These sutures are not attached to the parietes. The kidney is then passed back into a cavity prepared for it by peeling up the connective tissue, and from the muscular and fascial structures of the wall of the abdomen and is held definitely in place, even without sutures. These, however, are now introduced in the form of several downward loops of chromicized catgut passing in and out of the fibrous capsule and escaping the stroma of the organ. The wound is closed by deep catgut and half deep silk-worm-gut sutures, leaving a small superficial cigarette drain for a few days. Shoemaker's experience with several patients observed for over a year has shown the method to be successful in keeping up the organ and to be free from bad consequences.

A PALATABLE COD-LIVER OIL PREPARATION.

The day for nauseating combinations of drugs has passed, this state being brought about by the ability of chemists to present an efficient yet palatable product. All things being equal, that combination which is pleasing to the taste will meet with much more favor at the hands of physicians than another of equal potency but less palatable.

This rule is especially applicable in the case of preparations containing cod-liver oil, a remedial agent that will long continue

to be a favorite with physicians. The many pathologic conditions that will respond only to cod-liver oil, showing its great worth, have put chemists on their mettle to prepare combinations, in which are incorporated all of the virtues of the oil with the disagreeable features eliminated.

Hagee's Cordial of the Extract of Cod Liver Oil Compound long ago won the favor of the medical profession and deservedly so, too. This cordial possesses marked advantages as a cod-liver oil product and its superiority over ordinary cod-liver oil is due to its palatability. Its administration may be continued over indefinite periods of time. A stomach that would quickly revolt against the pure oil, or imperfectly prepared combinations containing it, will accept Hagee's Cordial without any evidence of distress.—The Medical Mirror.

The electrically lighted diagnostic set illustrated in the advertisement of the Electro Surgical Instrument Co., of Rochester, N. Y., which appears on another page, is an instrument needed by every physician. This concern also manufactures all kinds of electrically lighted instruments and electro therapeutic apparatus, and we would suggest that our readers write for complete catalogue.

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DOCTOR:—Are you interested in a treatment for impotency which is effective in every case? L. B. Hawley, M. D., of Rochester, N. Y., has invented an appliance for the treatment of male sexual impotency, which immediately restores confidence in the patient, and through this confidence, a cure is effected. This is the only practical method for the treatment of these cases. If you wish to know more about it, write for free descriptive circulars fully explaining this remarkable invention. The moment you see the circular, you will realize its possibilities.

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THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 323.
New Series Vol. XIV, No. 194.

New Albany, Ind., November, 1907.

\$1.00 PER ANNUM
SINGLE COPIES, 20 Cts.

ARTICLES.

EYE STRAIN.

By Frank Y. Gilbert, M. D., Portland, Me.*

This paper takes its origin from the fact, first, that the physicians who have narrowed their field down to study and research of single organs are constantly pointing out new and well-founded theories and facts each year; second, that the general practitioner who covers the whole field of general medicine finds little or no time to devote to reading the exhaustive writings, and, if so, to separate the grain from the chaff put forth by each line of specialist. Its object will be first to make as clear as possible the meaning of eye strain, and then, avoiding the attitude of the extremist, place before this association, so far as lies in my power, the generally accepted facts and theory of the oculist of to-day.

The classification that I have followed was suggested in a series of papers by Boston oculists published in the Boston Medical and Surgical Journal. Dr. G. M. Gould, in his recent contribution to literature, lays great stress on eye strain in nearly every disease. His attitude has caused as much comment among the oculists of this country, as did Dr. Osler's age limit among the older men. An editorial from the Ophthalmic Record is more expressive than any I can think of at present writing. It says: "Indeed, one rises from a perusal of his interesting booklet with the impression that eye strain may and does cause, not merely almost every bodily ailment but even mental and moral errors, and that possibly, nay well nigh certainly, if Adam had only taken Eve in good time to a thorough refractionist, she would never have suffered from that persistent sinking feeling in the pit of the stomach which caused her to desire the forbidden fruit, and that lack of power to inhibit impulses which led her to take it, whose mortal taste brought death into the world and all its woes, with loss of Eden." One can not but admire this man and even

forgive him for being such an extremist, when we realize the great amount of time and study he has devoted to research, and now find him standing practically unsupported, advocating what he firmly believes to be true.

In addition to hypermetropia (far sight) and myopia (near sight) there may be also, astigmatism in one or both eyes, and that superimposed on these basic errors of refraction in such a way that we have two focal points in each eye, four in the two, and no one of them fall properly on the retina. In addition to these, there may be such muscular imbalance that we have not only convergence and divergence, but very possibly, one eye may rise above the other, so that these errors must be corrected for binocular single vision. Such a demand for nervous stimulus is a constant drain upon the nervous reserve which every one must have to tide him over time of stress and depression. Eye strain is not then a sole cause in neurotic conditions, but is considered a precipitating one.

Most people have some ocular defect, and many are unaware of such until commencing presbyopia emphasizes their infirmity. Two persons may have the same amount of refractive and muscular error; the one has headache, while the other has none. This can be accounted for only by the power of resistance to nervous irritation, in the one case, and the lack of power in the other. If a man's nervous equilibrium is such that it is easily disturbed, or, if his power of resistance to nervous irritation is diminished, there then follows some functional nervous disturbance exhibiting itself at the points where the individual, with the greatest difficulty, maintains peaceful activity, so to speak. One man has headache, another dyspeptic symptoms; another muscular twitching, etc.

The following case may serve to illustrate my meaning. Male, age 30, bookkeeper. Was referred to me by family physician on account of persistent headache while using eyes, also marked injection of conjunctiva and sclera. History was as follows: Throughout school days suffered more or less from headache during use of eyes. Eyes injected, styes coming with varying frequency. Noticed twitching of lids, and,

* This paper was presented to the Maine Medical Association by the Maine Eye and Ear Association.

during the latter part of his school days, became extremely nervous, so marked that, at the completion of his course, he was advised to seek out-of-door work. This he followed for a few years with absolute relief, and as he expressed himself, "thought he had outgrown his old trouble." Six months previous to his consulting me, he started in at bookkeeping with a gradual return of his old trouble, becoming aggravated to the extent that the conjunctiva and sclera were markedly injected. Under mydriatic he showed one and a half dioptre hypermetropia with slight astigmatism in each eye. He is now wearing full correction with comparative ease and doing his work with practically no return of his old trouble.

As to slight errors of refraction and their influence on the neuroses, most of us during times of exhaustion, when our nervous reserve has reached a minimum, find that so small a thing as a fold of clothing or a button, pressing on some spot, makes it impossible for us to maintain that particular position, whereas, ordinarily, we would not have noticed so small a thing. So with the neurotic individual, the constant effort to see clearly tends to upset his mental equilibrium and aggravate his already nervous condition. When we refer to the neuroses, we include that class of cases whose nervous reserve is slight and for a good part of the time not under control. In this class of cases, clear vision with the least possible effort is of utmost importance, as no organ of the body is in more constant use than that of sight.

As regards epilepsy, let me quote you from a recent writing of Dr. Miles Standish, of Boston, who, after systematically examining a series of epileptics, concludes as follows: "In adults, where symptoms have existed for some time, he has had no marked success, but in children and youth, it is certain that epileptiform convulsions have been absolutely cured by correcting errors of refraction or muscular imbalance."

As regards chorea, Ranney has given the following classification, viz.: Those who recover, whether under medical treatment or not, and those who do not under any plan of treatment. In the first class, he has succeeded in shortening the attacks, and in a good percentage of cases the correcting of refractive errors resulted in immediate cessation of symptoms. In latter case he reports marked and even entire relief in some cases given up as hopeless.

It is safe to say that about 10 per cent. of the cases of migraine are wholly relieved by glasses alone, while of the remaining 90 per cent. are more or less relieved. So that in this trio of neuroses, trying to both physician and patient, the oculist points to a path, sufficiently tried out, to warrant his

saying, here lies an avenue of possible, if not complete, relief.

A great deal can be said in consideration of eye strain as a factor in the lateral curvature of the spine. Any refractive error or condition of muscular imbalance, causing the growing child to lean too far forward over his desk, or causing a tilting of head to one side, may induce lateral curvature. Under such condition, a right-handed patient will generally support his head on the left hand; leaning far forward may induce upper left dorsal curvature, that is, the right shoulder droops and the convexity is the left. So also does an oblique astigmatic axis, causing patient to tilt head to one side, to obtain clear vision, induce a faulty position.

Simple myopia causes patient to lean too far forward over desk in order to bring eyes nearer objects looked at. So also does a high degree of hypermetropia, as patient will approach the eye too near the object viewed in order to obtain a larger, though not a clearer image. Either condition induces lateral curvature. One writer has reported statistics of 2,314 school children, of whom 571 had lateral curvature. He found that the amount of myopia varied in direct proportion to the degree of scoliosis.

As a factor to be considered in children backward in their studies, a great deal can be said; for example, take a child who is quick in thought and speech; active in all out of door games and perhaps a leader in such things, yet in school work seems unable to master the subjects in his course, should suggest at once the possibility of eye strain. The acuity of vision may be normal, so that with ordinary snellen test card at 20 feet, he reads normal, yet finds things blurred or indistinct on close application of eyes, so that, rather than labor with increasing discomfort, he bends his whole energies to his out-of-door sports, which do not require their use. The symptoms may be divided as follows:

Objective Symptoms.

Backwardness in children otherwise bright, frequent rubbing of eyes or pressing them shut with hands to rest the ciliary muscle; frequent changing of position of book or head to make the accommodation and convergence balance better; scowling, blinking, or pinching lids together when trying to study; eye-lids red or covered with crust and scales; dropping out of lashes; styes, squint or muscular insufficiency.

Subjectively.

Child complains of words running together or shutting eye to make the print come out clear. Eyes feel hot and painful, until child, unable to keep up this unnatural strain, is practically forced to become inattentive to eye work, and necessarily backward in all

that pertains to knowledge. This forced inattention allows the entering of those thoughts of mischief which are said to be present in the idle mind.

Lastly, I want to consider reflex phenomena of nasal origin, which resemble ordinary symptoms of eye strain. As this class of cases usually have some refractive error, glasses are prescribed with expectation of relief, a result which is manifestly impossible. It is of the utmost importance that the oculist shall recognize the nasal factor. The following extract from a recent edition of Posey covers the ground very well: "A spot on the septum so deflected as to have its convex surface in contact with the adjoining turbinate body, or any other form of nasal disease which may be accompanied by hyperesthesia of the mucous membrane of the nose may produce reflex symptoms in the eyes, such as pain and photophobia; lacrymation; persistent and recurring conjunctival or ciliary injection; blepharospasm; accommodative or muscular asthenopia, etc. In other words, pressure symptoms in nose may cause symptoms similar to those of eye strain.

The characteristic features of nasal headache are: (1) That it may begin at any time, whether the eyes are used or not. (2) That it is usual unilateral (at least when it begins) and that it usually begins in some one part of the head, each attack having its origin in the same place. (3) The pain becomes worse, if anything, when the patient lies down, while the act of walking or stooping results in a throbbing that is almost intolerable at times. An interesting feature in a series of cases reported was that the refractive error was seldom the same in both eyes, and moreover, was subject to the most erratic changes, due apparently to pressure in the nose.

In what cases should eye strain be suspected. The preceding remarks have covered for the greater part those classes of cases where pathology is still obscure, and the treatment unsatisfactory to physician where the correcting of existing refractive errors have been productive of more or less good. Generally speaking, then, the symptoms of eye strain may be summed up as follows: Headache is the most frequent result, more often frontal and occipital. Vision may be good or poor, but blurs either on immediate or constant use of eyes, intensified in some cases to a swimming of the page, which is cleared only by closing the eyes for a moment. May have fatigue, discomfort or pain in the eyes or head during or after use.

Local Suggestions.

Congestion of conjunctiva, with tendency to become chronic if strain be not relieved; stytes; chalazons; redness of lids, with crust formation or scales; falling out of lashes;

sensitiveness to light; spasm of lid; faulty position of head, due to astigmatism myopia (near sight), and high degrees of hypermetropia (far sight); muscular imbalance; strabismus. Clinical observation has sufficiently proven the value of careful refraction in the following conditions, to warrant its holding a prominent place among the physician's therapeutic agents, viz.: In inflammatory condition of eyes and lids, more particularly of the chronic variety; cases of nausea; dizziness; dyspepsia; "the blues;" nervousness; irritability; insomnia; brain fog; neurasthenia; or a general inability to take up the burden of life, for little do we think of the great amount of dependence that we place on the special sense of sight, until perhaps we are awakened to the fact that we are gradually losing it.

As to Treatment.

These malformations of part of the eye, producing errors in the sight may be accounted for as follows: While our standard authorities state that all children are born hyperopic, some recent writers tell us that almost all children are born myopic and remain so up to the fourth or fifth year. After this, the greater per cent. are hypemetropic, while those remaining myopic have a tendency to grow progressively worse under strain of school work, unless corrected. Astigmatism is as a rule either congenital or due to disease or to pressure of muscular imbalance. Any inflammation of cornea, muscular imbalance or deformity of structures about the globe will tend to alter its shape, causing refractive errors. We persistently insist on rest in treatment of nearly every inflammatory condition up to time of restitution, if possible, yet, how many of us consider the additional strain and consequent activity, thrown on an eye recovering from a corneal ulcer, for instance, after cessation of acute symptoms up to time of restitution? Does it not then seem reasonable that with properly fitted and properly adjusted lenses, allowing the eye more readily to focus images properly on the retina, a more rapid and complete convalescence will be obtained?

The generally accepted rule is that all cases under 40 to 45 years should be tested under mydriatic, and some cases over 45. For mydriatics we have in most common use, atropine, homatropine, cocaine, or a combination of the last two. The action of cocaine is most rapid but transient, lasting about three hours. Homatropine acts next as to time and lasts about twenty-four hours, while atropine requires longer to act and lasts about a week.

In my practice, I use atropine almost wholly in young children as the ophthalmoscope and retinoscope may be our only means

for measuring the refraction. In school children and adults under 45 years, I use homatropine in every case where consent can be obtained. If the symptoms are not relieved by correction under homatropine test, I strongly recommend use of atropine as the last resort. I use cocaine in occasional cases where out of town patients have only a couple of hours and must return by next train, so can not well dispense with near use of eyes. As to the combination of homatropine and cocaine, it unites the quick action of the latter and the more complete action of the former, making an efficient mydriatic in a certain class of cases.

I can only tender my sincere apologies to the association for this cursory review of a subject, broad in all its headings to the specialist, and yet narrow to the practitioner. Nevertheless, lest the writer has buried his meaning in technical terms and thereby obscured it, he would beg indulgence to the following brief summary in closing. (1) In the various classes enumerated in the abstract of this paper, where the physician has tried every conceivable drug in the pharmacopela, labelled for such a disease, and finally allows the case to drift as hopeless, careful refraction of the eye has proved a most valuable therapeutic agent for such cases and is well worthy of consideration. (Let me here state that we now have scattered over the State of Maine, men now confining their work, either to the eye alone, or combining it with the allied specialties, with still others doing refraction as a side line, so that I venture to say, that there are very few general practitioners at present who are out of range of a specialist whom he can consult or to whom he can send his cases. In referring cases to your specialist, I would strongly urge that you write a note, stating your opinion as expressed to your patient and either stating what per cent. the patient can afford to pay or what per cent. of charge you are accustomed to make, and I feel safe in saying that any member of the Maine Eye and Ear Association will show due courtesy to your patient and respect your position as regards fees.) This leads me to my concluding remarks, viz.: Neither you as counselor, nor your patient acting under your advice afford to take chances with a superficial or mechanical examination. Go with your patient, if possible, if not, send him with an explanatory note to your brother specialist and you will accomplish three results, viz.: (1) It will cost your patient less in the long run. (2) You are giving your patient the benefit of the specialist's opinion. (3) If at the end of all you have obtained no relief for your patient you can conscientiously tell him that you have done all in your power, which is more commendable in a physician than the reputation of clinging to patients until sheer desperation forces them to change.

UNCINARIASIS IN THE MOUNTAINS OF NORTH CAROLINA.

By W. P. Ivey, M. D., Lenoir, N. C.*

'Tis true that history repeats itself. The importance of the different varieties of human entozoa in the production of disease was for a long time overestimated. In the days of our grandfathers, it was believed by doctors, as well as laity, that in children at least, they universally existed; that many serious troubles were caused by their presence, and that their eradication was the preliminary step in all successful treatment. Then came a period when doctors did not attach any great importance to intestinal parasites. I have belonged to this later period, and it has been the rarest thing for me to prescribe an anthelmintic, except to placate a solicitous mother or grandmother. To-day again one intestinal parasite at least is forcing its importance upon us, and I am pressed into service in making this phenomenal leap from indifference to enthusiasm. To me, gentlemen, one of the most surprising happenings in my professional career is that I, in this year should be reading before the North Carolina State Medical Society a paper on worms. But such is the case, and my only apology is "that times change and men change with them." I have used the word worms advisedly. The subject of intestinal parasites has in the past, wittingly or unwittingly, been turned over to quacks and charlatans. The subject of uncinariasis is to my mind of too much importance to be taken possession of by the same gentry, and we must be on our guard to prevent it. It exists most largely among a class of people, whom it is going to be a hard matter, at least, to convince that it is a matter of any consequence. In order to give proper dignity and importance to the disease, I think we should be careful to invariably use the technical name and avoid the term hookworm or hookworm disease. By inattention we will fail to impress upon the laity the importance of the disease and its treatment will fall away from the physician into the hands of sharpers, and we will soon see advertised and on sale Smith's Hookworm Lozenges, Hamilton's Hookworm Harvester, and so on and so forth. I do not propose to go into the consideration of uncinariasis at length. Dr Stiles has published a report on it and has touched fully upon every feature of it. Those of you who haven't that report I would advise to get it from the Marine Hospital service at Washington. He has studied it as a zoologist. What I shall have to say about it will be from the standpoint of a clinician and sanitarian.

After hearing with much interest Stiles'

* Read before N. C. Medical Society.

paper at Hot Springs a year ago, I was satisfied that there was such a disease in my locality, and awaited developments. A case soon presented itself in the person of a five-year-old girl. The prominent symptoms were anemia, edema, severe headache, and pain in the stomach, and were of such gravity as to cause the parents much uneasiness and to hunt the doctor. Stiles took the train and hunted up his cases. There are hundreds of cases in North Carolina that will not need to be hunted. They will hunt for us. One fact that led me to suspect uncinariasis in this case was that I had treated an older brother of hers for anemia a year previous. I asked for a specimen of the feces, which was reported by McCarthy to contain the ova of the uncinaria Americana. The color of the feces in this case attracted my attention and would have established the diagnosis without the aid of the microscope. It was decidedly reddish, showing plainly the presence of blood. In no other case since, have I seen that pronounced reddish color of the discharges. Having established the diagnosis I gave thymol treatment and found plenty of small thread-like creatures, but never having seen uncinarias, I was not certain that I had what I was looking for. They correspond in length only with Stiles' description. If I were to describe the creature as to length, I would say that the uncinaria Americana is a parasite, that is eighteen letters long and three-quarters of an inch short. My uncertainty lay in the fact that my find would not tally in size with Stiles' description as being the size of a hat-pin. I think a more correct description of their size would be the size of a No. 10 thread. In order to be certain of what I had I sent some of the specimens to Dr. Stiles, who promptly reported that they were the genuine article.

About this time a case was brought to me for treatment, the urgent symptoms being an inability to sleep in the recumbent position. It was a six-year-old girl, stunted, sallow, and so completely waterlogged that she could scarcely breathe. I did not take time to make a test for uncinariae by the microscope, as I had previously discovered them in an older sister. There are six children in this family, and all of them, together with their parents, are probably in the same boat. I mention this case to call attention to the prompt results of treatment. The child had not lain down to sleep for some time. The very next night after the thymol treatment, she was much improved, and the second night slept naturally as well as usual. Following this up with iron and arsenic, she was soon perfectly well.

In looking up probable cases of uncinariasis, I remembered a girl to whom I had given iron several times years ago. I went to her mother and telling her what I suspected, inquired after her daughter's health.

She said it was good, and that she had not had any trouble since I had treated her five years ago. I called for the girl and found her to all appearances a victim of uncinariasis. She was undergrown, pale and peaked, but had no complaint that would call for treatment. I obtained a sample of feces, and in fixing it up to send away for examination, I discovered, without looking for them, the mature uncinaria. It was of no use to send that sample away. Like Mr. Goat in the convention of animals, it had "done already voted." This girl was 13 years of age and had uncinarias for five years without any impairment of health to attract the mother's attention. In three years more of time, however, that girl, when the time for menstruation comes on and she begins to do manual labor (for she belongs to the working class), will need medical attention, and will need it for a long time, if the doctor should happen not to be posted on uncinariasis.

Only last month I was called ten miles in the country to see in consultation a patient in a family in which I had practiced some years ago. The trouble was uncinariasis, and the physician had recognized it and had given the proper treatment. He had been able to recognize it, because he had been present at a clinic I had held before our county medical society on the subject last fall. And here let me say, that this is the very best way to stir up interest in the subject among country physicians, who do not attend meetings like this. It would be well for some one to hold such a clinic before every county society in this State. I mention this case especially to note that there is a lethality attached to the disease, for the boy died a short time afterwards. He had one very unusual symptom, it being a femoral phlebitis with a very large, tender and painful leg. While in the house, a girl was called in for me to see and I found in her a former patient, whom I had periodically loaded up with Blaud's pills. She was a pretty girl, but her face was like wax. Of course her trouble was uncinariasis and the way was perfectly clear to put roses in to her cheeks. That was a large family of children, and all are probably infected, but only those two to the extent of producing disease.

Another family of three children I recall as calling upon me often for Blaud's pills; in fact, they had stated to me that they could not get along without them, that they were as necessary as bread. On examination I found all of them with uncinariasis. As a rule I haven't gotten a very large number of uncinaria from the cases in which I have used treatment, but from each one of this family large numbers were obtained, one of them estimating the number as four or five hundred. A neighboring family to this, consisting

of seven members, had always looked to me to be in bad health. One of them I tested for uncinariasis with positive results, and the reasonable conclusion is that the others have the same trouble. These people live on a little mountain stream, are very poor, and I believe that most of the people living in that valley have uncinariasis. Several other cases in different neighborhoods I have tested with positive results, but no individual mention of these cases is necessary except to give the number. Up to this time I have examined 20 suspected cases and found the disease in every case. Not a single examination has been negative. This experience conclusively proved to me that uncinariasis was very common, so common, in fact, that I began to have a lurking suspicion that possibly I might have the thing myself, and if I, why not my next-door neighbor and my fellow-citizen around the corner. To my mind, just at that time, there was danger that dyspepsia might lose to uncinariasis the proud distinction of being the great American disease. Having had uninterrupted success in finding cases with uncinariasis I concluded to change tactics and look for some one without it. I proposed to take and test a few cases from my practice in whom I have no reason to suspect the disease. This investigation, for lack of time, has not proceeded far enough to be of any value.

These twenty cases actually demonstrated in different sections of the country, with a probable twenty more cases in the same families, and all these from among the patrons of only one physician, show the disease to be a common one in Caldwell county. This county is not a sand district. It is right in the mountains, with a clay soil, with here and there a mixture of sand and clay on a clay subsoil. While I can not speak authoritatively of other counties in Western North Carolina, I am not going to admit that Caldwell county is the only wormy county in the State. The condition there is only a fair sample of what will be found in other counties in the west, and as for that matter, over the entire State. That it is confined to sandy districts, as Stiles concludes, I don't think will be proven by more general investigation. I think he reached this conclusion because he did not carry on any investigations in the mountain districts. The reported cases and published maps do not mean that it does not exist elsewhere.

The discovery of this parasite as the cause of disease will clear up for many of us cases that we have not heretofore understood. Review with me, if you please, a few such cases. In my early practice I was associated in partnership with an older physician, for whose professional ability I and every one had the profoundest respect. He had a case of anemia with general anasarca. He made a diagnosis of valvular disease of the

heart and gave the boy up to die. Another neighboring physician for whose professional ability we had no respect, was called in, fixed up a lot of two-penny nails and vinegar and the boy went right on to recovery. That case in the light of present knowledge was uncinariasis. Now valvular disease of the heart may and does occur in uncinariasis, just in the same way that phlebitis occurred in the case I mentioned. But one of the most common complaints for which these patients will seek our aid is a supposed heart disease. Next to cardiac symptoms in frequency, we will encounter disorders of menstruation, in some cases amenorrhea, in others menorrhagia. Only this month I saw a nineteen year-old-girl with proven uncinariasis, who had menorrhagia for a month. All of these cases of uncinariasis, except the worst cases, can be much benefited by treatment for anemia, without the specific parasite treatment, but the benefit, of course, is not lasting, being the result of symptom treatment only.

Two years ago I saw in the country a child, who was pale and dropsical. I asked for a sample of urine, which I found loaded with albumen. My diagnosis was nephritis and a few weeks treatment with Basham's Mixture cleared the urine of albumen, relieved the waterlog and dispensed the pallor. Later in the summer I went through the same experience with an older brother, and the next summer had the identical experience with both of them. Both of these children had uncinariasis, for I have since examined them for it, and unmistakably found it. I also found it in the mother, and natural supposition is that the other children are similarly affected. Within the past few months I have gone through the same experience, mistaken diagnosis and all, with two other children in different parts of the county. To-day, were I to see them, I would in short order make a diagnosis of uncinariasis and would supplement the treatment used with a few doses of thymol.

Two years ago I went ten miles in the country to a woman in eclampsia. She was in the last weeks of pregnancy, was very sallow and dangerously waterlogged and altogether it was a most unpromising and discouraging case. My diagnosis was albuminuria of pregnancy. With the usual treatment she soon miscarried and recovered. I take the liberty now of changing that diagnosis. It was uncinariasis. How do I know? Well, because I saw her again three weeks ago. She was in the early months of pregnancy; her urine was not albuminous, but her appearance clearly indicated the disease and her feces according to McCarthy contained in abundance the ova of uncinaria Americana. I propose with thymol to make it my business to jugulate any such ordeal as we went through two years ago.

Ten years ago I saw a grown woman, who was in articulo mortis, when I first saw her. My diagnosis, as best I could make it, was valvular disease of the heart. To-day, if I should see that case, I would in all probability call it uncinariasis, for she was one of a family of children in all of whom I have established such a diagnosis. Three others children of this family died during childhood. They were, according to the father, puny in the same way as the others and probably died of uncinariasis.

Some time ago I was treating a bloated anemic five-year-old boy. Before he had time to show any improvement he contracted pneumonia, to which he rapidly succumbed. This case, in the light of subsequent developments, was uncinariasis, and but for that he would not have died from the pneumonia. Uncinariasis undoubtedly undermines the resistive power to disease and just as certainly increases directly and indirectly the mortality rate.

I know of no disease of like importance, that is so quickly and certainly relieved by treatment as is the disease we are considering, but I must confess that I am disappointed as to the permanency of results. Two of my cases first treated I tested for reinfection six months after treatment and found both of them reinfected. One of them showed marked clinical symptoms, the other, according to the mother, was perfectly well. Each of these cases was treated with full doses of thymol three times till no uncinariae showed up in the discharges. It will be profitable for some one with a microscope to take a case and test it systematically at intervals for reinfection. My present view is that most of the cases, especially among children, ought to be given a course of thymol at least every three months. There must be a preventive as well as a curative treatment.

Hear, gentlemen, my conclusions:

Uncinariasis is among us.

It is among us abundantly.

It is a grievous burden to its host.

It is a menace to the neighbors.

It kills folks.

It makes mental underlings.

It makes physical dwarfs.

It curtails producing power.

It steals dollars from our wealth.

What are you going to do about it?

THE MEDICAL TREATMENT OF GASTRIC ULCER.

By S. A. Arany, M. D.

(Reprinted from "The Medical Press,"
London.)

The progress and development of surgery made it possible that cases of gastric ulcer and its complications, which have been considered as fatal in former years, are amena-

ble to surgical treatment and recovery. It is undeniable that numberless people owe their life to the skilful and timely intervention of the surgeon's knife, but, on the other hand, there is very little doubt as to the fact that many a surgical intervention, however skilfully performed, has accelerated the patient's death, who, under proper and carefully prolonged medical treatment, could have enjoyed his life and fairly good health for many years to come.

It is not very long since the operative treatment of appendicitis has been introduced, and nowadays its employment has become so universal that medical treatment of that ailment has almost gone out of fashion. I say medical treatment has gone out of fashion, as it is fashionable to recommend a patient who suffers with some symptoms of appendicitis to undergo an operation whether there be immediate necessity or not. Now, in one-third of the cases the surgeon reveals that there was nothing the matter with the appendix; in another the conscientious surgeon may find the appendix in a condition that would have improved with less risk under a proper medical treatment; and finally, in the last third of the cases the surgeon will find that his intervention is really wanted.

I consider it just as grave a mistake to send a case in which medical treatment may be successfully employed under the surgeon's knife as to hesitate with the operation in a case which medical treatment proved to be of no avail.

I look upon the operation of appendicitis as an ultima ratio and am of the same opinion as far as gastric ulcer is concerned.

The operative treatment of this latter disease is also very much in vogue, and the profession resort to it much oftener than needful. It ought to be looked upon as an ultima ratio, and its indications which I beg to give in the following, deserve to be well considered: I only avail myself of the surgeon's help: If the patient's life is in danger (1) through fulminating hemorrhage which can not be arrested; (2) through perforation; (3) inanition caused either by the fact that the ulcerated stomach can not retain any food, or by contractions and adhesions.

I have lately read a good many papers advocating surgical treatment in preference to medical treatment, and some of the authors even went so far as to state that medical treatment effects only in 25 per cent. of the cases a cure.

This is a very small percentage indeed, and I can not account for it under any consideration, unless I am to suppose that the cases referred to have been a collection of unusually severe cases. For well-known clinicians as Leube, Ewald, and Cohnheim's statistics average between 50 and 70 per cent. but as many of their patients comprise hos-

pital patients who can not always be depended upon, as, after their leaving the hospital, we very rarely know how they were getting on, I beg to quote my statistics, and shall confine myself to cases of whom I hear from time to time, not taking into account such cases as I have seen once or twice in consultation.

The number of my cases is eighty-two, all of whom I have known from two to ten years. Out of the eighty-two eleven have died from the following diseases: Six died from cancer, after having enjoyed from four to seven years' fairly good health after their treatment for gastric ulcer; two have been operated upon for hemorrhage twelve and sixteen months respectively after their treatment and died soon after the operation; one died of perforation, one of diabetes, one of apoplexy.

The remaining seventy-one are enjoying fairly good health; of course, some of them have to live carefully and are in need of some treatment from time to time; but do patients on whom a gastro-enterostomy has been performed do differently? Is it the rule or is it the exception, that robust health of a normal constitution has been restored by the operation?

If medical treatment is not always successful there are principally three reasons which account for it: (1) Late diagnosis; (2) wrong treatment, under which heading I also comprise treatment which has not been continued for a sufficiently long time; (3) carelessness and disobedience on the patient's part.

The diagnosis of gastric ulcer is not quite so easy as our text-books have taught us. We have learned in school that in gastric ulcer the patient complains about violent pain in a localized spot, which occurs almost immediately after meals. The pain is localized in the right hypochondrium, and is in most cases followed by vomiting. But in what a cluster of diseases do these symptoms appear? Don't we meet them in ordinary gastralgia, nervous dyspepsia, gall-stones, and nephrolithiasis? Doesn't the primary stage of cancer show the same symptoms? But the text-book points out two more very important symptoms, namely, hyperchlorhydria and hematemesis. As far as the first is concerned, it is a symptom on which in a great majority of cases we can depend, but it can not be looked upon as a *conditio sine qua non*. According to Ewald's investigations, only in 34 per cent. of his cases was hydrochlorhydria present, whereas in 57 per cent. the acidity was normal, and in 9 per cent. the acidity was found to be sub-normal. Out of my eighty-two cases the acidity was tested in sixty-eight cases, out of which latter in sixty-three cases hyperchlorhydria was established, and in the remaining five the acidity was normal. Hematemesis is very often the only symptom

which raises the practitioner's suspicion as to the nature of the disease, but it is of quite frequent occurrence that hemorrhage remains unobserved and in many cases the amount of blood is very small, and in other cases vomiting does not take place, and the feces are not paid attention to.

Palpation is but of secondary importance; it very rarely reveals the seat of the ulcer, and owing to the hyperesthesia of the patients, very often misleads the examiner.

If the text-book doesn't supply us with all the information we want, practice teaches us that a patient suffering from gastric ulcer is very rarely so emaciated and cachectic as a sufferer from cancer; he also recuperates very soon after the acute symptoms have left him, and enjoys, in contrast to the latter, a very good appetite, has a clean tongue and no nasty taste in the mouth, as is usually the case in dyspepsia and cancer. The fear of food, in contrast to the loathing of food in other stomach troubles, is also very characteristic in gastric ulcer. These and several other little things must guide the practitioner in making a diagnosis, in which case diagnostic errors and ill-effects from medical treatment will not be experienced.

Treatment.—In the acute stage of the disease the patient must be confined to bed for eight or ten days. Absolute rest will best alleviate the pain and hemorrhage. For the latter I usually employ the ice-bag and make the patient swallow ice. This usually stops the hemorrhage; should it prove insufficient, a hypodermic injection of 1 c. c. of a 0.1 per cent. solution of adrenalin will in most cases stop the bleeding. Instead of the ice-bag, Leube and others recommend hot applications, which I prefer to use in the second stage of the treatment. Very effective is the administration of magistery of bismuth, first commended by Mathes and chiefly advocated by Kussmaul and Ewald. The latter recommends as large doses as 20 grammes per diem; he prescribes the drug in a watery solution to be taken in three portions. The drug is to be taken for a protracted period, and Ewald never noticed any ill effect, even if 600 or 800 grammes have been consumed. Mathes' object in administering the bismuth is that the latter forms a coating round the stomach wall and protects it from further injury.

With the same object Cohnheim prescribes his oil treatment, but the oil is not so well tolerated as the bismuth, although its action on the hyperchlorhydria is undoubtedly beneficial, and has, if anything, a high nutritive value.

I remove the ice-bag on the third or fourth day and replace it by cold compresses which are changed every hour. On the same day, the patient, who has hitherto been fed by the rectum, gets small quantities

milk (preferably cold, boiled milk in the first few days). Or if the latter is not tolerated bouillon. The amount of milk or bouillon must not exceed two pints per diem in the first three days of alimentation per os, and all we can add is a raw egg or two, which must be well beaten up in the milk or bouillon, and is mostly well tolerated by the patient.

At the end of the first week the patient is put on a mild Carlsbad treatment, as first prescribed by Leube. The latter gives his patients a tumblerful of luke-warm Carlsbad water, which decreases the acidity of the stomach and also acts as a mild aperient. I prefer to administer the Carlsbad water fairly hot—about 140 degrees F.—and give the patient three wine glassfuls in the course of two hours. Now the quantity of milk may be increased, and porridge and soft-boiled eggs may be added. As a rule, on the tenth or twelfth day the patient is quite relieved of pain and feels fit to leave his bed. As soon as this stage is reached I increase the amount of Carlsbad water to three tumblerfuls a day, and in cases of constipation add a teaspoonful of Carlsbad Sprudel salts to the first tumbler. This goes on from four to five weeks, and in the three weeks of treatment I replace the compresses by a thermophore, to be employed during the night. Dietary concessions must also be made, as the patient will now possess a good appetite and require some solid food. This, however, must be done very carefully, as many a relapse has been caused by an over-generous diet. I wish to emphasize this fact, as latterly a certain part of the profession in Germany is rather in favor of a generous diet even immediately after the hemorrhage, intending thereby to increase the patient's power of resistance. How risky this theory it is needless to explain, and my general rule is to keep the patient on milk, porridge, rice pudding, fish, fowl or greens for at least two months, and even afterwards to advise him to abstain from beef, pork, game, pastry and bread. This latter, in any shape, is very badly tolerated and should be replaced by gluten biscuits.

THE SUPERIOR MAN, THE PHYSICIANS' OPPORTUNITY IN HIS CONSUMMATION.

By Dr. R. H. McGinnis, Jacksonville, Fla.*

In all the industries of the world the trend is ever onward toward better production; the irrigation of arid plains transforming them into square miles of fertile fields, productive of life-sustaining commodities; the harnessing of great water courses to turn the wheels of progress; the tunneling of the

rocky elevations of nature and the populous cities to save time in transportation; the utilization of all the discoveries in mechanical arts to the conservation of energy and the production of power; the usage of every means of nature and science to raise the most productive and healthy live stock and cattle.

Medicine has kept pace with this onward march and often has led the procession, yet a great universe of science still remains unutilized and undiscovered. Preventive medicine has had its share in this advancement, and in very recent years has occupied the minds and energies of many of our greatest and best scientists, and the prevention of disease is to-day the mecca toward which medicine is progressing.

The superior man must be born under the auspices of health and vigor; nourished by the advice of preventive, protective and progressive science; reared and nurtured in an atmosphere of and surrounded by the preservative influences of hygiene, sanitation and disinfection, directed by the experience and wisdom of the medical man. "The goal of yesterday will be the starting point of to-morrow," says Carlyle, and to-day is the day of action.

In many of the large cities societies and organizations exist endeavoring in every way possible to gather together the flotsam and jetsam of waifdom and teach them the laws of physical health, mental and moral progress. These institutions are doing a work that is so far-reaching in its import that it can not be reckoned at present, but awaits its fruition in future generations. The influences of the instruction obtained in these institutions does not stop with the children they teach, but through the children the parents are reached and brought to a knowledge of hygiene and sanitation. I need not dwell here on the desirable and beneficial efforts of these societies, as you are, no doubt, familiar with the numerous and interesting press notices and magazine articles along this line.

The Family Physician.

It is the family physician, however, that has within his power the guidance and direction of the greatest force, when intelligently grasped by the mothers and daughters of this broad land, to bring into being this offspring of the future—the superior man. The mother and daughter must be instructed along the lines of hygiene and sanitation, womanhood and motherhood largely by the family physician, and in his regular administrations a few simple instructions properly directed will sow a seed, the result of the harvest of which is beyond computation.

Dr. Charles G. Kerley says: "The physician can in no possible way serve the nation better than by teaching the mothers of

*Read before Florida Medical Association.

the nation how to rear the children of the nation. It is the physician who comes in deliberate contact with the daily family life, and who speaks and they believe. The physician is the physical guardian of the rising generation, and determines in a great measure the character of the spiritual, commercial and political life of the nation; in fact, he aids the people of the nation to receive what they have a right to demand. As a result of his having lived and lived nobly, there will be happier homes, fewer disappointed lives and less crime. In such a capacity, and from a standpoint of national work, the physician is the most important member of the community in which he resides, a more valuable man to the state or nation than a man in any other calling, who prepares the soil, and without sound bodies and normal minds, the sacred and religious teachings are of little avail.

"Where the nation shall stand twenty-five or fifty years hence, and what position it shall occupy among the nations of the earth, depends more upon the physician of to-day than any other calling whatsoever."

Should Teach the Mother.

The physician should teach the mother the sacredness, the honor, the privilege, the joy of motherhood; that their offspring is a part and portion of themselves, having their attributes, tendencies and dispositions. When the mothers thoroughly realize the laws of health and physical growth it will soon be inculcated into the middle of the children; the children will be taught the fundamentals of proper living by having it demonstrated in the home life, and a guard will be thrown around them in the selection of associates in early adolescence and enable them at maturity to choose the companion of life from the viewpoint of morals, health and character. In former ages the men who were great and achieved some distinction in life were considered to inherit the father's attributes, but we know to-day that the truly great men have had great mothers. It is the mother's influence on the early training of the boys that produces the thinking, ready and full man.

Actual experience has often demonstrated that "being to the habit born" is worth more than being "to the manner born." Habits leave marks that are seldom obliterated. Every impression received by the brain is retained. What appears to fade from memory is still intact in the subconsciousness and only needs a chance association to be awakened. As nature demonstrates in the plant life the habitual need of sunshine, dew and rain in order to grow, blossom and fruit, so the human plant calls for habitual, vital influence and suggestion that are needed for its growth and development.

Denied of cultivation and removed from the influences of proper association, the

child of the nobility will show degeneration. Habits of all that is good may be learned in childhood's nursery days; ideas of justice, gentleness, kindness, sympathy, promptness, courage, fortitude, obedience, patience and self-reliance. In the tenderest days of childhood when mother's kisses are a balm for every hurt, the lessons of love and faith may be impressed. The kiss of love, affection and devotion chases away the cloud of tears and of pain and substitutes the sunshine of hearty and healthy laughter.

Hear the words of a lover of children: "Strike with hand of fire, O weird musician, thy harp strung with Apollo's golden hair; fill the vast cathedral aisles with symphonies sweet and dim, deft toucher of the organ keys; blow, bugler, blow until thy silver notes do touch and kiss the moonlit waves and charm the lovers wandering mid the vine-clad hills. But know, your sweetest strains are discords all, compared with childhood's happy laugh—the laugh that fills the eyes with light and every heart with joy. O rippling river of laughter, thou art the blessed line between beasts and men, and every wayward wave of thine both drown some fitful fiend of care. O laughter, rose-lipped daughter of joy, there are dimples enough in thy cheeks to catch and hold and glorify all the tears of grief."

Treatment of Children.

"The school of vice is seldom recruited from the homes where children are treated as companions." The characteristics of the child should be carefully studied and the plans of his life directed according to his temperament. The family doctor is in a position to observe these characteristics of the growing youth and by the proper use of his knowledge so direct the influences which the parents may bring to bear on the growth and development of this "paragon of animals," the superior man.

The training of the body must go hand in hand with the training of the mind, and as the child advances in years the physical and mental equilibrium must be maintained. To live in the twentieth century means more than existence. The physical must be strong and vigorous to cope successfully with the mental or else the one will retrograde at the expense of the other. Each day brings to us the work of genius, and it becomes expedient to inquire the way to proper manhood and to enforce a strict adherence to every law governing man's being.

Cause of Consumption.

It naturally occurs to us in treating of a subject of this nature to consider the transmissible diseases or the tendencies thereto, and to inquire of the opportunities of the family physician relative to their prevention. Tuberculosis is the only disease which I feel I have time to mention in a

short paper which bears directly upon the subject I have chosen. Tuberculosis, the chief cause of death in the world to-day, the greatest drain upon the nation's resources, disabling from one-fourth to one-third of the population at the productive period of life—from 15 to 45 years of age. "The tribute in lives and misery which it levies upon any community is the tax upon that community's collective ignorance, prejudice and greed; the wages of these is death, and tuberculosis is the coin in which it is paid."

Said Pasteur, "It is in the power of man to cause all parasitic diseases to disappear from the face of the earth." The chief cause of infection in tuberculosis is from man to man, communicated by means of the expectorated matter. With the proper destruction of this source of communication the disease could be eradicated in this century. Is not this fact an incentive to every physician to exert his energies, knowledge and power to instruct the ignorant and counteract the prejudices relative to so stupendous a force in the destruction of human life and the disabling of human resources?

Twenty to forty thousand persons are incapacitated every year in the city of New York alone; one hundred and fifty thousand die in the United States, and two millions in the entire world succumb each year to the ravages of this disease. Florida has her pro rata of course, and as she has no public or private sanatoria in which these unfortunates can be placed the care of them devolves upon the physician. It is not so much climate that the victim of tuberculosis needs as it is fresh air and sunlight, and it is within the province of every physician having one or more consumptives under his care to have provided the necessary fresh air, hygiene and sanitative regimen as is carried out in the successful experiments followed in the various resorts throughout the country.

I need not tell you in this age of progress that "an ounce of prevention is worth a pound of cure," and every physician who has in his practice a family whose tendencies are tuberculous should exercise that influence which is his to prevent, as far as within his power, the marriage of those afflicted, and instruct those who inherit the suitable soil, relative to the exercise of all the preventive forces which nature and science offer.

Disease is Contracted.

A man, strong and vigorous, marries; the woman has a tubercular history, one or both parents died of it. The man and wife are happy and apparently healthy, enjoying life; three or four years elapse, the woman begins to fade and soon dies of consumption, leaving one or two children. The husband contracts the disease from his wife

unknowingly; later he marries a strong, healthy woman, and in the course of two or three years, he too succumbs to the disease, but not before the second wife has contracted the disease from him. And in the course of a few years she also dies, stricken down by this "great white plague." This is not fiction or the flight of the imagination, but a true picture reproduced and reproduced every year. The vast majority of the cases of consumption in Florida, as elsewhere, are among the poorer class who have not the means of obtaining the advantages offered by the sanatoria situated throughout the country, and it behooves the physician's of this State to take a stand and endeavor to organize an antituberculosis society, such as exists in many States, and to formulate some plans for the control, and eradication of consumption, for without some action on the part of the physician and the broad-minded citizen the ravages of consumption will continue to incapacitate the physical force of and destroy the lives of the future "superior man." And, if the crusade is thorough and scientific, with patience and forbearance toward all, working no hardship to any, future generations will ascribe as the physician's heritage the sentiment of the immortal lines:

"To scatter plenty o'er a smiling land,
And read their history in a nation's eyes."

ABSTRACTS AND SELECTIONS.

THE DIAGNOSTIC SIGNIFICANCE OF THE HYPERACID GASTRIC CONTENTS.

Rubow (Hospitalstid; Muench. Med. Wochenschr.): Hyperacidity of the gastric contents can be produced in two ways, either through a simple hypermotility or through an actually excessive secretion of hydrochloric acid. In both cases the gastric contents are hyperacid, but in the former only a small amount of contents can be obtained, whereas in the latter the quantity is abnormally large. The latter alone points to the existence of a gastric ulcer.

TREATMENT OF SOME EYE DISEASES BY THE GENERAL PRACTITIONER.

In the Virginia Medical Semi-Monthly Wilkinson discusses this subject and reviews the diagnostic points of the four conditions mentioned in his paper.

Conjunctivitis.—Always a discharge; pupil always dilates freely; cocaine dilates pupil; sensation of burning; pricking, and of foreign body; some photophobia.

Ulcer of Cornea.—Usually a discharge; great photophobia; the continuity of cornea

has been broken at some point; there is usually a decidedly white, ulcerated spot. When there is any doubt as to whether the cornea is involved, this can be determined by instilling first a solution of cocaine, 2 per cent., followed in two to five minutes by an instillation of fluorescein, 1:100, followed again by a drop of cocaine. If there is an ulcer this will stain it yellow, and it becomes very distinct.

Iritis.—Small, usually ragged, irregular pupil; discolored iris, deep-seated inflammation; pupil not dilatable with 2 per cent. solution of cocaine; pain in eye and temple, worse at night; little or no discharge; normal tension; some photophobia.

Glaucoma.—Hard eye; great pain in eye and temple, sudden in onset; steamy cornea, slightly dilated pupil, but regular. Shallow anterior chamber.

In conclusion he offers a few don'ts in ophthalmology:

1. Don't treat an eye until you know what is wrong with it.

2. Don't use a poultice of any kind on the eye. Poultices have done more damage than they have ever done good. They mask the symptoms and cause rapid ulceration and breaking down of tissues.

3. Don't use atropine in the eyes of persons above the age of forty years, unless you are absolutely certain that you have a case of iritis.

4. Don't use acetate of lead in ulcers of the cornea. You will get a lead deposit in the cornea.

5. Don't use cocaine in ulcers of the cornea. It causes a degeneration of the epithelial membrane and invites ulceration.

6. Don't treat your chronic headache and migrainous patients for years with pills, purgatives, and coal-tar preparations, but send them to a competent oculist and have them fitted with glasses.

THE NASOPHARYNX AND THE THROAT IN THE DEAF-MUTE.

Jas. Kerr Love (*Annals of Otology, Rhinology and Laryngology*): In all countries there are from 20 to 30 per cent. of what the author calls semi-deaf and semi-mute—those that can hear loudly-spoken words. The presence of enlarged tonsils and adenoids in these does not differ materially from that in children with normal hearing. If these children are to be taught to speak, it is vitally necessary that the resonating cavities above the larynx be made as normal as possible.

A MODIFICATION OF GUENZBERG'S TEST.

Steensma (*Tijdsch. vor. Geneesk.*, 1907, No. 3; *Deutsch. Med. Wochens.*): In the phloroglucin-vanillin test for free hydro-

chloric acid, S. replaces the phloroglucin by means of phloridzin. Otherwise the test is done in the usual manner. He believes that his modification renders the reaction more delicate and more distinct.

INTERCRICO-THYROID TRACHEOTOMY AND DECANNULATION.

E. J. Moure (*Annals of Otology, Rhinology and Laryngology*): This article follows an address before the Paris Academy of Medicine in 1900, and corroborates the opinion expressed at that time that it is highly important to decannulate infants and children upon whom an intercrico-thyroid tracheotomy has been done at the earliest possible moment, in order to avoid the glottic and subglottic stenosis that would follow the prolonged stay of a cannula. There is danger of ankylosis in the cricoid articulations and loss of function and speech. Avoid cutting the cricoid in infants.

OLIVE OIL IN CHOLELITHIASIS.

Dr. R. Alexander Bate, of Louisville, Ky. (*The Medical Bulletin*), believes that olive oil does dissolve fresh cholesterol calculi and that all conditions characterized by an excess of organic acids are accompanied by gallstones, and states that only the bilirubin calcium calculi appear unchanged in the evacuations of those receiving olive oil internally. Surgery, he thinks, is only indicated in cases where exhaustion would take place before solution of the calculi could occur. Of fourteen patients observed by the author, all of whom had had some medical treatment, three were operated on and died. In two instances a recurrence took place. Nine patients had been apparently cured by the medicinal treatment.

AN IMPROVED TECHNIQUE FOR TUBERCULO-OPSONIC PREPARATIONS.

A. P. Ohlmacher (*American Medicine*) describes a different method from that usually employed for the fixing and staining specimens of blood prior to their examination to determine the opsonic index. He employs carbolfuchsin, staining and decolorizing in the usual manner, and employs as a counter stain, a solution of toluidin blue for the nuclei, and a weak eosin solution for the protoplasm of the neutrophile leucocytes. The film is fixed with 95 per cent. alcohol, which after drainage, is ignited and allowed to burn off. An ordinary smooth slide is used. The points claimed in favor of this procedure are: Lack of the necessity of an especially roughened slide, certainty of fixation, and sharpness in contrast for the tubercle bacilli.

ACUTE AND CHRONIC SUPPURATION OF THE EAR AND NOSE THE DIRECT CAUSE OF FACIAL ERYSIPELAS.

C. F. Welty, M. D., San Francisco (Jour. Amer. Med. Association): The author claims that there is sufficient evidence to warrant the assumption that erysipelas of the face is due to a direct infection from a contaminated field of pure or mixed infections of streptococci; that in the majority of these cases the infection can be demonstrated, and those that are not demonstrated are probably present and are not found; that the epidemics of erysipelas are nothing more than a direct wound infection through surgeons or nurses; that the so-called idiopathic erysipelas is a misnomer. As to why we should not have erysipelas with every case of streptococcus infection, the writer believes to be dependent on the character of the streptococci and the immunity of the patient. He also believes that the streptococci attain a more virulent form when one of the various cavities is infected. Welty is of the opinion that facial erysipelas is due to pathological conditions of the nose. In his article he asks six theoretical questions, which he answers: 1. Why should we have erysipelas especially confined to the face? a. Because it is nearest the seat of infection. b. Because the secretion of pus produces an abrasion of the mucous membrane or skin, and then an inoculation follows. c. The inoculation is also made by the handkerchief, or, more particularly, by the finger. 2. Why should we have more than one attack of facial erysipelas? a. Because the source of infection is practically never eliminated without operation. b. The reason erysipelas follows operations is explained by the fact that you open a field for direct infection. 3. Why do we usually find erysipelas associated with suppurative processes of the ear and nose? Because the source of infection is nearly always present. 4. Why should this not be accepted as a fact when streptococci can be demonstrated in the secretion, or is it absolutely necessary to demonstrate the presence or absence of the same? When streptococci can be demonstrated in the secretion of the ear or nose in mixed or pure infections, he thinks it should be considered an established fact that the erysipelas is dependent on the same. 5. Why is it that 82 per cent. of facial erysipelas starts from the angle of the nose? a. Because the secretion produces an excoriation which leaves a direct course for inoculation. b. Through repeated cleansing of the nose with the handkerchief or otherwise, an abrasion is produced which leaves a point of inoculation. c. Because this streptococcus is the most virulent of germ infectious and will propagate where others would have perished. 6. Why is it that every case of streptococcus

infection of the ear and nose is not followed by erysipelas? He believes that it is due to immunity, just as in the case of the occurrence of Klebs-Loeffler in the mouth does not mean diphtheria in each case.

ETHER NARCOSIS BY RECTUM.

Stucky (Am. Journal of Surgery) is of the opinion that this method of narcosis is especially desirable for operations about the head, neck, and face. The patient passes under its influence more quickly and recovers from it more quickly than by inhalation. The absence of rectal irritation in recent practice has been due (1) to more thorough preparation of the patient; (2) to better quality of the ether used; (3) to improved administration. Before administering the ether the bowels must be thoroughly opened. The ether bottle is immersed during administration in a water bath at 80 degrees to 90 degrees F. (six degrees below its boiling point), the ether is vaporized by air pressure through an afferent bulb and tube, and delivered through a stiff rectal tube with a single opening. The tube is inserted from ten to fourteen inches. Should the patient become too deeply narcotized the ether should be massaged out of the bowels, and the latter again distended with oxygen. A small dose of morphia before narcosis will inhibit peristalsis and facilitate etherization. The author thinks it certain that the apparatus will be simplified, the technique of administration better understood and the method the one of election in selected cases.

THE COATED TONGUE.

L. Kast (Interstate Med. Jour.) says that the examination of the coated tongue as an index to gastric disorders, upon which formerly so much stress was laid, has now generally fallen into disrepute. This is probably chiefly due to the lack of evidence that the condition of the stomach can affect that of the tongue, either by the direct ascent into the mouth of stomach contents (in the absence of regurgitation, eructation or vomiting) or otherwise. Kast, however, has shown that such a process actually does take place. A number of patients, all of whom were free from regurgitation, eructation and the like, were made to swallow capsules containing lycopodium powder. The mouth was rinsed with water that same evening, and again the next morning. In over half the cases the mouth was found to be free from lycopodium in the evening, but to contain it next morning. The conclusion may fairly be drawn that in some cases stomach contents may gradually wander up the esophagus into the mouth and form a coating on the tongue. In these cases the condition of the tongue may fairly be assumed to represent that of the gastric mucosa.

THE RUBBER TEAT AND JAW DEFORMITIES.

T. F. Pedley (Brit. Med. Jour.) points out the damage done to children by the use of the "baby comforter." The child feeding at its mother's breast does not suck the milk, but squeezes it out by the pressure of its jaws; in fact, it drinks rather than sucks. With the rubber teat, on the other hand, the child sucks—which quite differently affects the development of its mouth. The habit of mouth breathing and the deformities of the teeth and jaws, so evident to pediatricists, are in large measure due to the artificial feeding of infants with bottle and rubber teats and the use of the dummy teat or "comforter." The latter should be banished from the nursery; and children who can not be breast-fed should be spoon-fed.

DIETETIC TREATMENT OF ENTEROCOLITIS.

(Morse, British Medical Journal): The object to be aimed at in the dietetic treatment of enterocolitis is such an arrangement of the food as will starve the bacteria without starving the baby. The food should be withdrawn for as long a time as the infant can bear starvation, plenty of water being given in the meantime. In choosing a substitute for milk, the attempt should be made to select, if possible, a food on which the bacteria which cause the disease grow with difficulty. The author uses whey and pasteurized buttermilk. All food given should be very much diluted. It is better to begin with whey-mixture, peptonized-mixtures, or barley-mixtures, than with straight modifications. The mixtures must never be highly alcoholized, as this tends to throw the work of digestion off the stomach on to the intestine.

BUTTERMILK FEEDING.

H. C. Carpenter (J. A. M. A.) has fed twelve infants in this manner. They varied in age from one to fifteen months. The average gain was eight ounces a week. This increase in weight is of special interest because every one of these cases was seriously ill at the time they were put upon the buttermilk. Five were treated in an infant asylum; and their average gain was seven and one-half ounces a week. This buttermilk is of especial advantage among the poor and in dispensary practice, costing, as it does, about five cents a quart. When fresh it is a most excellent temporary food for infants suffering from intestinal indigestion, enteritis and marasmus. There seem to be no unpleasant effects; infants almost invariably take it well. A few, when first put on buttermilk, vomited slightly; but

this ceased in a day or two, with only one exception. Carpenter believes that whatever success has attended the use of buttermilk is due not so much to the absence of fat as to the great ease with which the proteid of buttermilk is digested. Several of his little patients who could not digest 0.75 per cent. of calcium casein digested perfectly the 2 to 3 per cent. of casein lactate in the buttermilk.

THE SANATORIUM IN THE OAC.TUBE- THE SANATORIU IN THE TUBERCU- LOUS CRUSADE.

C. L. Wheaton, Chicago (Journal A. M. A.) considers the sanatorium one of the most important aids in the crusade against tuberculosis; climate can no longer be considered the one great factor in the cure. The sanatorium has shown that pure air in any climate is the essential thing in the arrest of this disease. It is not, however, through the private sanatorium that the most beneficial results are to be obtained; there should also be public sanatoria for indigent consumptives, without depending altogether on anti-tuberculosis associations taking the initiative and asking only for a certain amount of government aid. While a future successful serum treatment of the disease is a possibility, we should at present rely on the rational methods at our command and discourage the tendency to faith in nostrums and quacks.

TUBERCULOSIS OF THE TESTICLE— RESULTS OF CASTRATION.

The report of Beck (Deutsche Zeitschrift für Chirurgie) is based on 62 cases, of which 13 were bilateral. In 34 of these other parts of the genital system were affected, in 12 the urinary organs, and in 12 there were no other lesions noted.

Of the unilateral operations, 33 have been traced, and of these 15 are cured, 8 have died of tuberculosis, and 9 have had recurrence in the other testicle. After three years there is no more danger of recurrence. Of the bilateral cases 9 can be traced, and out of these 2 are cured and 6 have died. The association of tuberculosis of the epididymis and of the prostate is not nearly so serious as that with tuberculosis of the urinary tract. In more than half the cases disease of the prostate recovers of itself after castration. Of the 12 cases with disease of the urinary organs (bladder), only one was cured. The fact that tuberculosis of the prostate heals after removal of the testicles, and the greater frequency of uncomplicated disease of the epididymis, show that the process begins in the testicle and extends along the canals in the direction of their normal flow.

THE NEW ALBANY MEDICAL HERALD.

NOVEMBER, 1907.

Old Series Vol. XXV, No. 323. New Series Vol. XIV, No. 194

GEO. HANLON DAY, M. D., Editor.

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EDITORIAL.

THE CAUSE OF DEATH.

To dissipate the inordinate fear of sudden death which patients frequently manifest when they consult us concerning "a pain around the heart" is one of the most grateful phases of practice. The emotion of fear in itself affects the cardiac cycle so that by this means alone tumultuous and irregular beats and precordial pain and distress are induced.

This fear of death from heart disease is certainly fostered by lay press accounts which one finds daily, and perhaps several times in one issue, says the editor of Medical Times. The diagnosis in the event of a sudden death on the public thoroughfares is often made by an astute policeman. That the unfortunate man died of heart failure is a conclusion quite satisfactory to the lay reader; and latter's psychism with the result that the worry exhibits itself reflexly in precordial uneasiness. It

were quite as scientific to state that one dies of failure of respiration; every creature's death comes about ultimately with the cessation of one or the other or of both of these phenomena. Thus the average citizen has come to fear, whenever he goes to bed with a sensation to the left of the sternum, that—to use a Hibernicism—he will wake up in the morning to find himself dead.

Another frequent factor in inducing symptoms which the patient believes to be due to a disease of his heart, is gastric pyrrhosis and flatulence. The distended stomach, with little else than the thin diaphragm to separate it from the heart, presses upon the latter organ so that the uneasiness results which is referred to it. Nor would we by any means hold lightly that valvular disease is not attended with danger to life; yet we know that most of those who suffer thus live many months, and that their comparatively slow demise is due to some such concomitant factor as a kidney lesion or to the pressure effects of a dropsy. Yet we would observe here parenthetically that there are heart lesions which may result in sudden death; these are the fatty heart, and the myocarditis and the cardiac dilation consequent upon the infectious diseases and upon prolonged exhaustion. Here the matter is not to be considered lightly. Except in these conditions, however, sudden death is not to be apprehended as due to the heart; and in corroboration of this view the Journal of the American Medical Associations sets forth some valuable data. Stokes half a century ago protested against the popular conception that sudden death is very common in heart disease; even so the termination is as a rule only after abundant warning. Gibson, of Edinburgh, has recently emphasized Stokes' expressions. And with these two English authorities Brouardel, of Paris, is in striking agreement; and finds, for his part, that death is especially apt to be brought about by the kidneys; and next to this apoplexy is responsible. "This would leave heart disease to occupy only the third place." Nevertheless "from a prophylactic viewpoint it will be found that the measures best calculated to avoid sudden death from kidney disease will be essentially the same as those calculated to secure the integrity of the heart. Among them the most important are the avoidance of sources of poisoning either from without or from within, the avoidance of alcohol, tobacco, too large an amount of meat, and the prevention of auto-intoxication of all kinds."

PERIOSTITIS.

The periosteum is the layer of fibrous connective tissue which surrounds bone. It is found over all the bones of the body, although in some situations it is called by other names. Over the skull, for example,

it is called the pericranium, but there is no particular reason for the name, since the structure and function of this membrane are different in no respect from those of the periosteum of the long bones of the limbs. Furthermore, the membrane which covers cartilages is called the perichondrium; this differentiation is convenient, although the membrane is precisely similar to the periosteum. Cartilage and bone are but varieties of connective tissue, the harder matters are developed and mineral salts deposited merely to give strength and rigidity to these structures. Bone is first laid down as cartilage, and afterward the structure is changed by a process which originates in the periosteum. It is from this membrane, also, that the greater portion of the exterior of the bone receives its nourishment; growth in thickness, likewise, takes place just beneath the periosteum. The connection between this membrane and the bone is thus seen to be very close.

When a bone is fractured into many pieces we find that those pieces which retain a considerable attachment to the periosteum have a fairly good chance to retain their life, that is, if the blood vessels of the membrane are not greatly injured. The other pieces which are not so attached are almost sure to die. When doing an operation for necrosis of bone the surgeon first strips the periosteum from the diseased area and folds it back to preserve it. After taking out the dead and diseased bone the flap of periosteum is replaced, and from it new bone is formed.

The nerves of the periosteum appear to be those which have to do with regulating the blood supply and presiding over growth. They do not convey the ordinary sensation of touch, but are able to convey the sense of pain. Any morbid process which injures these nerves is usually revealed by this latter sense. The inflammations are thus announced. In this instance we sometimes have another factor, that of pressure. All acute inflammations are accompanied by an excess of blood in the part, and also by a multiplication of connective tissue cells and an immigration of innumerable leucocytes. These accessions cause the tissues to swell, and when it occurs just below the periosteum or in its inner layers there is a tendency to raise this membrane up from the bone. As its attachments are very firm indeed the pressure becomes great. The nerves in the periosteum receive the full force of this pressure and the pain is extremely severe, in fact there is probably no other affection which is so painful. The character of the pain has been described as if some one were boring into the bone with a gimlet; it is so great as to quickly overcome the strongest men, and it drives them to desperation unless it is relieved.

As a rule a case of periostitis may be

traced to some injury of the part; in some cases this may be very slight, and is regarded at the time it is received as a trivial matter. There are many instances, however, in which no injury can be found.

The disease may not be noticed for several days after the receipt of the wound. The first symptom is pain, which gradually increases in severity. In the beginning the surface of the skin may show no signs of the inflammation below it, but unless the bone is deeply covered the skin becomes red and edematous after a few days. If the case is not treated, or not treated properly, the disease may take a variety of courses. The bone is destroyed by a necrotic process, which varies greatly in extent; the periosteum is gradually killed and dissolved by the pus. Then the disease spreads upward to the skin, and to all sides. If the skin is near the bone, an abscess forms and ruptures, thus providing a natural drainage. In the meanwhile the pus burrows under the surrounding periosteum, loosening it from the bone; it also penetrates the fascia between the muscles, and may proceed for a long distance, dissecting the organs apart.

Such a process leaves a large and ugly hole with sinuses extending in many directions, it is hard to cleanse and necessarily heals slowly.

One may very pertinently ask how it is that inflammation, which is in this case a microbic process, can start from an injury which does not break the skin. Some times a way may be traced from the injured skin through the small lymphatic channels to the bone below. A bone felon, which is a periostitis of the last phalanx, often originates from a very small injury to the end of the finger about the nail, or even from a "hang nail." In many cases no such a connection can be found, and we are forced to explain it by saying that the infection was brought in the blood. In a state of health no microbes are supposed to be in the blood, but a few of them are constantly entering from the intestine, the tonsils and the nose. These are normally soon destroyed, but if they happen to lodge in a place whose resistance is weakened by injury they may survive and multiply.

The treatment of periostitis depends largely upon the stage at which it is first seen. When taken at the very start it is often possible to abort a periostitis by strong counterirritation, as by the liberal use of the tincture of iodine. At a little later stage ichthyol is frequently used; this is applied to the part and may be covered with hot wet dressings. In less urgent cases an ointment of ichthyol of from ten to twenty-five per cent. strength may be substituted.

When pus has already formed or when we believe that its formation is inevitable the only thing to do is to open the area freely.

The cut must go through the periosteum. The injured tissues must be examined thoroughly and all necrosed bone scraped out. Then the wound should be flushed well with some hot antiseptic solution and dressed without closure, so as to allow all the drainage possible.

The principal symptom is the pain, which will have to be allayed with anodynes. Morphine is too constipating, and there is the danger of forming the habit; most other drugs are too feeble. The best one to use is papine; it is an artificial preparation from opium, and contains the pain-relieving elements without those which produce bad after-effects. A teaspoonful is the usual dose, and it may be repeated every four hours if necessary.

MR. MCFADDEN'S VIEWS.

Some time ago there was a club formed in New York City, every member of which believed it was possible to live a hundred years. They called their association "The Hundred Year Club." Not a great deal has been heard of the results of their researches, and the ordinary individual is still compelled to grope around in the dark when searching for information in regard to longevity.

Editor Macfadden, of Physical Culture, says: Under right conditions, one should live to be a hundred years old. In fact, it should be only the beginning of a good, ripe old age. Throughout the entire animal world you will find that the average life is five to six times the period that it takes to reach maturity. The average man could hardly be called fully grown until he is twenty-five; in some cases growth continues until he is thirty. Under proper conditions, therefore, man should live from 125 to 150 years.

The influences of civilization may be properly termed baneful, from birth to death. We are taken away from Nature; away from all or nearly all that is normal, and instead are surrounded by conditions and environments that are artificial and in consequence debilitating, and even debasing in a physiological sense.

Of course, the actual years of one's life depend somewhat upon inheritance. The more vitality one inherits, the longer will be his years, provided that ordinary care is taken of his body. For the body may be compared to a powerful yet delicately adjusted machine. Under conditions of perfect care, a mechanical device made by man will reach many years beyond that period which it would last if in unskilled hands. If it is ill-used, its parts allowed to rust, its age of usefulness will decrease materially. And so with the body. The body must be kept clean, internally as well as externally.

External cleanliness is not sufficient. By internal cleanliness, I mean that care and diet and exercise which are necessary to maintain a proper activity of the various organs.

The body can not be kept clean internally without proper muscular exercise. The circulation of the blood is accelerated by such exercise, and the body is strengthened materially through the same influence.

To keep young, to maintain life for a long period, the use of the muscles of the body is most essential. There is no need of being a strong man in the ordinary sense of the term. It means simply that you must keep the muscular system from weakening by giving it regular and intelligent use.

Over-eating is a sin, greater in its evil effects than the alcohol and tobacco curses combined. The harmful habit is to be found in every home, and has a damaging effect on nearly every human life. It wears out a man's body years and years before its time; it dulls the nervous and mental energies, weakens the vital organism, and brings about premature decline and decay in the life of nearly every civilized human being.

What does the average individual know of the requirements of the human body, as to character and quantity of food? He judges his requirements only by the capacity of his stomach. He has given little or no attention to the actual dietetic needs of the body, and in nearly every instance he eats, not all he needs, but all he can. And this habit exists practically all through life. It is a case of stuff, stuff, three times a day, almost from the beginning to the end! No wonder that the human organism wears out! No wonder that the average individual grows old before his time!

The intelligent man, owning a horse, carefully measures out a certain amount of food at each meal. He knows that if the horse were to be given all that he might desire, he would be incapable of doing his due share of work, and that he would be made sick. So much for our intelligence as manifested in feeding a horse.

Now if the same attention were given to the necessity of limiting the food of human beings, the years of life of the average individual would, I am satisfied, increase from twenty-five to fifty years, and perhaps in some rare cases to one hundred years.

If one desires to live well, and at the same time live long, the science of diet should be carefully studied. For it is well to remember that nearly all human ailments come from the inability of the stomach to properly digest the food that is "dumped" into it. I say "dumped," because it is a very appropriate word. Very few persons properly masticate what they eat. Two or three motions of the jaw, and the mouthful of food is swallowed. And when this and various other evil habits with which human beings

are afflicted are considered, it is really remarkable that so many manage to live beyond what might be termed middle life.

Though there is much harm done to the body through improper foods, there is no question that an excessive quantity of food is the greatest of all dietetic evils. When one feels the necessity of changing his diet, he will usually select some health food, or edible article he understands to be especially wholesome, and then imagine that he can use it in unlimited quantities.

Now, no matter how wholesome an article of food may be, if it is taken beyond your requirements, it turns into rank poison in the stomach or intestines. It is really far better for one to follow the ordinary civilized diet, with its meat and coffee and pie, than it is to select the most healthful foods furnished by Nature, and eat these foods to excess.

Living On Two Cents a Day.

Several years ago, I carried on an experiment for two weeks, during which period my food cost me only five cents a day, but I must say that this is luxurious compared to a diet which one might select if extremes of this character were required.

Now the cheapest and about the best food we have is wheat. The average man can be thoroughly nourished on a half a pound of wheat daily. In fact, some might not be able to eat and satisfactorily digest this amount. You can usually buy wheat for about one dollar a bushel. Thus you can see that the amount of wheat that you would eat during the day would cost you less than one cent. If necessary, I firmly believe that one could exist for an indefinite period without any other nourishment.

Wheat is a satisfactory food if eaten raw. Of course, I must admit that you must be very hungry for the saliva to permeate and make soluble the gummy substance of the wheat. The ordinary individual would have to fast some days before he would develop an appetite to enjoy raw wheat. But even when you can not eat it raw, it can be soaked and is then much more tasty and easy to masticate. You can soak it over night and then pour off water, though it would be better to merely add sufficient water to just moisten it, for when an article of food is soaked in water for any time a certain amount of the flavor is lost. After the wheat has been soaked in this manner, by adding olive oil or dates or raisins or some sweet fruit, you will find that it will make a very palatable dish, the cost will be very small, and you will still have a very wholesome diet.

But if you do not like uncooked foods, then you can simply simmer the wheat—do not boil it—for from six to ten hours. Then you will have a splendid cooked food that will supply all your needs. It is really a

pity that the information supplied in this editorial can not be in the hands of every needy person. There is absolutely no excuse for any one starving or even being poorly nourished when wholesome foods are so ridiculously cheap.

Abstracts and Selections—Continued.

DIAGNOSIS OF TYPHOID FEVER.

Stein (New York Medical Journal): Typhoid fever anatomically is characterized by a specific inflammation of certain lymphatic structures of the intestinal tract. This is principally marked in the Peyer's patch of the ileum. This characteristic of the ileo-typhoid has served to stamp it as a pathological unit, and has separated it from typhus and other seemingly identical fevers. Bacteriologically, typhoid fever is a well-marked group of infections characterized by a bacteremia or toxemia, due in a majority of cases to the Eberth bacillus, and in a minority of cases to a number of micro-organisms, which stand between the Eberth bacillus and the coli group. These latter micro-organisms have up to this date only been determined in part. Clinically, typhoid fever is a well-defined endemic and epidemic disease, with a tendency to self-limitation and immunization. The disease is characterized by certain cardinal symptoms, the typhoid tongue, the headache, the tremor, the typhoid state, the slow dicrotic pulse, the enlarged, often palpable spleen, the rose spot, the characteristic temperature curve, the Diazo reaction, the leucopenia, the Gruber-Widal test.

INJECTION TREATMENT OF SYPHILIS.

Smith (Lancet Clinic) has used the following formula for a number of years with the most excellent results:

R Hydrarg. bichloridi.
Acidi carbolic, aa., gr. viii-50.
Sodii chloridi, gr. xvi.
Aqua dest., dram, 30.

M. Sig.: Fifteen drops of the solution contain one-fourth grain of the bichlorid. This should be kept in a dark bottle.

The gluteal region is to be preferred for the injection on account of the large pad of fat and the thick muscular layers. Treatment should be instituted as soon as positive symptoms develop. In cases of pregnancy, when the woman has had one or more miscarriages, the injection of one-fourth grain of bichlorid of mercury each week has a most satisfactory effect, as the woman will go to full term and be delivered of a healthy child. The advantages of the bichlorid of mercury with phenol over other

preparations used in the injection treatment are: 1. It is practically painless. 2. The solution is so strongly antiseptic that with the proper aseptic care of the needle and skin abscesses never develop. 3. It is absorbed so completely that no nodosities remain. 4. It does not produce stomatitis or enterocolitis nearly so quickly as the other methods of injection treatment. 5. It is easily prepared by any practitioner.

APPENDIX IN RELATION TO PELVIC INFLAMMATION.

Helme (The Lancet) summarizes his paper as follows: 1. The association of appendicular and pelvic disease is due to contiguity rather than continuity of structure. 2. The accidental inward direction or pelvic position of the appendix is the chief factor in this association. 3. The appendix or the pelvic organs may provide the primary source of disease. 4. Appendicitis is a frequent source of dysmenorrhea and its associated mucous colitis. 5. The association of appendicitis with pelvic disease is the exception and not the rule. 6. The appendix is not a vestigial structure, but a highly differentiated portion of the intestinal tract and plays an important part in intestinal digestion. 7. The systematic removal of the appendix during laparotomy for pelvic disease in the absence of evident disease is not justifiable.

TO DETECT FETAL HEART SOUNDS.

The following method, according to M. Schwab (Centralblatt f. Gynkologie), enables the physician to hear the fetal heart sounds even before the middle of the fourth month. Push the contents of the uterus up against the roof of the fundus. The right hand, just above symphysis, presses gently downward, vertically and then upward toward the fundus. The stethoscope is then applied to the most bulging portion of the abdomen a little above the umbilicus and the fetal heart-beat can be detected.

TETANUS, WITH SPECIAL REFERENCE TO FOURTH OF JULY INJURIES.

C. A. Pease (Vermont Medical Monthly) has made a series of interesting experiments with blank cartridges and by inoculations, in order to determine if possible wherein the tetanus bacilli are lodged. In all twenty-two blank cartridges were examined, with comparatively positive results in one case. Pease says it is an interesting fact, that if the spores of tetanus are introduced into the body, freed of their poison, they are usually promptly destroyed by the phagocytes. However, if this is not done, the spores

would develop bacilli and begin to manufacture toxin and produce the disease. This suggests that many wounds may be infected with tetanus bacilli, but surrounding conditions rarely enable them to develop toxin enough to cause the disease. The period of incubation is three to fourteen days, and this period is shorter in small boys—five to nine days, the prognosis in cases developing within nine days being unfavorable. After that time there is a better outlook.

In conclusion he says it would seem that the spores of tetanus bacilli are far more common than generally supposed; that the mortality with the use of tetanus antitoxin is about 43 per cent., while in acute cases it is nearly 63 per cent. He urges strongly that all wounds liable to infection by the tetanus bacilli, and especially blank cartridge wounds, be treated at once in a thoroughly antiseptic manner, and immunizing doses of at least 10 c. c. of tetanus antitoxin be injected around the seat of the injury.

THE MANAGEMENT OF ANOREXIA.

Sternberg (Allgemeine Med. Centralztg): The author suggests as a simple therapeutic device, the artificial induction of thirst. The desire to partake of fluids is very readily aroused by drying the buccal cavity, which is done by preventing respiration through the nose, with cotton pledgets introduced into the nares. Together with the fluids, large amounts of nutritive substances may be administered to the patient, especially such articles as have been thoroughly chilled—for instance, milk, cream, beer, eggnog, wine, coffee, tea, with or without albumin, yolks or entire eggs, etc., etc.

Pruritus Vulvae:

- R. Acid. borici, 2 (gr. iii).
- Acid. carbolici, 2 (gr. iii).
- Morph. hydrochlor, 06 (gr. i).
- Lanolin, 60 (3 ii.).
- M. ft. Ung. S. Apply locally.

A FEW SPECIAL USES FOR STRYCHNINE.

Dr. J. M. French (Merck's Archives): In acute and chronic alcoholism no drug is of greater value than strychnine. Given both hypodermically and internally, in doses sufficiently large to impress powerfully the system, it relieves the depression caused by the use of alcoholics, and in a few days removes the craving for them. Its power to do this is one link in the chain of evidence that the two drugs, strychnine and alcohol, are physiological antagonists. The one tones up all the organs of the system, the other depresses them.

Strychnine is a direct antagonist to the venom of snakes, the effect of which is to

paralyze the vaso-constrictors of the abdominal region, as a result of which the mass of the blood is withdrawn from the cerebrum and accumulated in the abdomen, the patient dying of cerebral anemia. But to prove curative in these cases, it must be given in enormous doses the size of which is governed wholly by the effect produced and not by any of the ordinary rules of dosage.

As a heart tonic strychnine is regarded by many as superior even to digitalin. It has been advocated as a remedy of the utmost importance in phthisis, in which it acts by toning up the system to overcome the disease. In all forms of paralysis, after the acute stage has passed, it is the one remedy. It is antagonistic to chloral, calabar bean and morphine.

Strychnine may be given either hypodermically or internally. For its ordinary tonic effect it is usually given in the form of the sulphate, in doses of from 1-60 to 1-30 gr. three times a day, although the dose may vary within much wider limits than these. When it is desirable to bring the patient rapidly under its influence, the smaller dose of 1-134 gr. is preferable, and should be repeated every half to two hours until the effect is evident. For a large number of uses, the arsenate is the most desirable salt, combining as it does the virtues of two of the most powerful remedies in the pharmacopeia.

THE FRESH AIR TREATMENT OF PNEUMONIA.

Dr. Arthur Stern, of Elizabeth, N. J., in a recent number of the Medical Record, says:

Our medical papers are of late advocating a new treatment of pneumonia, namely, the fresh or cold air treatment, representing this treatment as a rather new way of dealing with this disease. In this case, as in a good many others, history repeats itself.

I cite Juergensen in Ziemssen's Handbook of Special Pathology and Therapeutics, Leipsic, 1877, page 174, translated from the German edition: "A pneumonic patient above all needs fresh air. If we can procure air without producing a draught, so much the better; but if we have to choose between foul air and draught, let us choose the draught and our patients will do well. Even if we let them take a bath under these conditions, and their wet skin is exposed to the draught, there is no danger. Very often we have removed a pane of glass from a window, or even the whole window, to let in fresh air, and we never have observed complications, such as bronchitis, pleurisy, and pericarditis; and we have never noticed a bad effect in the sequela of pneumonia, such as chronic pneumonia, phthisis, and so on. We would, therefore, not hesitate to expose our patients to the air until the temperature goes down, if we thought that the tem-

perature should be reduced and cold baths could not be used."

Juergensen, by the way, also recommends cold baths for the treatment of pneumonia.

EXPERIMENTAL CONTRIBUTION CONCERNING THE PATHOGENESIS OF INFANTILE ATROPHY.

Raffaele Pagano (La Pediatria) publishes a series of experiments done with puppies and consisting in recording their weights and examining their excreta; firstly, under normal feeding, then with scanty food, and lastly with inadequate and altered food. He observes: The steady loss of weight; the gastro-intestinal disturbances and the increased putrefactive processes as indicated by inoculations of rabbits with the extracts of feces and by determination of the amount of sulphuric ether in the urine (Salkowski's method); and later finds the gradual development of an atrophic state and the signs of rachitis with the swelling of the various bones, particularly those of the thorax, anterior limbs, etc. Dr. Pagano decides that it is the scanty and incongruous kind of food which acts as the main factor in the production of infantile atrophy. There is a derangement of the gastro-intestinal functions which gives rise to the processes of fermentation and putrefaction, and to the formation of organic poisons which are absorbed and produce a state of profound intoxication of the organism. He also infers from his experiments that this intoxication is greater when the food is abundant, but incongruous or altered, as there is then a proportionally greater production of toxic substances; and finally concludes that in primary or idiopathic atrophy there is no alteration of the gastro-intestinal mucous membrane, but that the pathogenesis of the malady lies in the processes of intoxication of intestinal origin and is occasioned by the insufficient, inadequate or altered food administered.

THE IMPORTANCE OF DISEASES OF THE NOSE IN TREATMENT OF THE SO-CALLED SCROFULOUS DISEASES OF THE EYE.

(Annals of Otolaryngology and Rhinology): A regular cleansing of the nose by large amounts of non-irritating fluids is the first thing to be done in treating scrofulous conditions of the eyes. Children under five years can easily be thus treated, especially after a demonstration on some other child. In a number of cited cases the author claims to have obtained better results by this method than by any other. His contention that no fluid can enter the middle ear while the drum is intact is disputed by many.



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FOR THE PREVENTION AND ARREST OF
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"Mulyptol should fulfill a great want among the medical profession. . . . Its properties are Antiseptic, Antipyretic, Absorbent, Hemostatic, Nutrient, Stimulant, Deodorant, Disinfectant, Non-poisonous and Non-irritating. A combination of properties not to be found in any other single drug."

Vide "Lancet," Feb. 20, 1904.
Vide "The Chicago Medical Recorder," 15th July, 1905.

DOCTOR, READ SOME RESULTS:

Cancer of Uterine Cervix: Dr. Chas. A. Sims, Kansas City, Mo., reports case successfully arrested after six months' Mulyptol treatment.

Cancer (Epithelioma) of Tongue: Dr. Arthur Holt, London, Eng., reports successful arrest of disease after seven months. Patient had refused operation. "Mulyptol Treatment" was recommended as alternative with these gratifying results.

Cancer of the Breast and Uterus: Dr. G. Cooke Adams reported results of fifty-five cases in which the disease was arrested by "Mulyptol Treatment" without operation, showing no recurrence three to four years after treatment was discontinued. Vide "The London Lancet," 20 Feb., 1904.

May be administered in Capsules, Emulsion, by Inunction, Inhalation, Hypodermic Injection, Rectal Injection and direct application.

Delivered prepaid on receipt of price: 4 oss. Mulyptol, \$1.00; 8 oss., \$1.75; 100 capsules, 2 or 5 minim., \$1.00; Antiseptic Toilet Soap, 25c per cake; 4 oss., Liniment, 50c; Red Gum Pastilles for throat, mouth, etc., with menthol and glycerine or glycerine alone, \$2.50 doz. boxes, or 25c box.

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Diphtheria: Dr. Hay Marshall, London, Eng., writes: "I was quite surprised at the rapid subsidence of the local and general symptoms under "Mulyptol" exclusively. Vide, The "Lancet," 26th Nov., 1904.

Tuberculous Gland in Neck: Dr. W. G. Bryson, Chicago, Ill., reports: "Reduced from size of small kidney to size of a hazel nut in two months. Had tried other inoperable treatments for twelve months previously, without results.

Tubercular Laryngitis and Hay Fever: Dr. C. F. H., Professor Laryngology, etc., Chicago Clinical School, after six months continuous use of "Mulyptol" in his practice reports most unexpected and gratifying results.

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Is composed of the active principles of Phytolacca, Decandra, Oleichem Autumnale, Cimicifuga Racemosa, Rhus Toxicodendron, Gelsemium Semperparvum and Siccus Pulmonaria.

Each drachm also contains 7-12 grains chemically pure Sodium Salicylate, held in perfect solution.

Possesses an incontestable efficaciousness not before attainable for the rapid relief and cure of Rheumatism, Neuralgia, Nervous Headache, Lumbago, La Grippe, Asthma, Chorea, Fermentative Dyspepsia, Insomnia, and all aches and pains.

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DOSE 1 to 2 teaspoonfuls as directed by the physician. Dose should be governed by the amount of Sodium Salicylate desired.

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Slade J. K. Taylor, M.D., Dallas, Tex., U. S. A.

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[Eucalypti Extract.]

The only preparation of the Eucalypt produced from fresh green leaves of a selected species and containing the medicinal constituents in an active form.

In an action at law recently brought by Messrs. Sander & Sons, Bendigo, Australia, at the Supreme Court of Victoria, and tried before His Honor, the Chief Justice Sir J. Madden, K. C., M. G., LL. D., against a party who tried to foist a eucalyptus preparation upon the market in a similar package to that in which the genuine "Sander & Sons' Eucalyptol" is contained, thus practising the grossest form of substitution, it was shown that this imitation was a crude, unrefined eucalyptus oil, containing all irritating substances and possessing no antiseptic power whatsoever.

His Honor, the Chief Justice of Victoria, said with regard to the Genuine "Sander & Sons' Eucalyptol" that whenever an article is recommended by reason of its good quality, etc., it is not permissible to imitate any of its features, and he granted a perpetual injunction preventing the defendant party from so doing.

There are many degrees between an absolutely inert and injurious article, and one which was proved by expert witnesses at this Tribunal of Justice to be absolutely pure and scientifically standardized, viz: the Genuine "Sander & Sons' Eucalyptol." But mediocrity has no place in medicine, and only the best and absolutely reliable article will make and maintain the Doctor's reputation. Thus the necessity for observing strictest adherence to most scrupulous discrimination in securing an approved product is once more convincingly substantiated by the foregoing.

Please specify "Sander & Sons' Eucalyptol" when prescribing.

The Meyer Bros. Drug Company, St. Louis, Mo., sole agents for the United States will forward one original package (one ounce) with literature added on receipt of one dollar.

SANDER & SONS,

PIROGOFF'S CAMPHOR TREATMENT FOR ERYSIPELAS.

Mayer (British Journal of Dermatology) is not in sympathy with a statement appearing in a former number to the effect that we do not possess a reliable method for influencing erysipelas. He has used Pirogoff's method for sixteen years, and thoroughly believes in it. Pirogoff recommends that doses of 0.15 gr. of camphor should be given every hour, or every two hours, and that the patient should be made to sweat freely by the administration of hot tea. The usual methods of external treatment are also employed.

MEDICAL GLEANINGS.

If the mother will take a one-grain pill of asafetida once a day for a week, baby's colic will cease.

A wart or a pigmented mole on the face may become an epithelioma if irritation exists. It may not if left alone.

For whooping cough, or any spasmodic cough, ammonium iodide, official dose, is claimed to act specifically.

Hamamelis, in a weak solution, will give nice results in hypertrophic nasal catarrh, if sprayed on or applied with a mop.

Arsenite of Copper.—This will be useful where there is a want of tonicity of the skin, where there is a grimy and sallow appearance with eruptions that are slow in breaking down and are surrounded by discoloration of the parts. Dose, 1-2000 to 1-1000 grains three times daily.

Twelve hours from the time of delivery the patient should have urinated. If no distress is occasioned, the physician may wait three hours longer before the catheter is passed.

The combination of equal parts of cocain, menthol, and carbolic acid is an excellent anesthetic application where profound anesthesia is not necessary, as in cases in which a chancre is to be cauterized or a drum membrane incised.

Cases of concealed gonorrhea in women may be determined by pressing the anterior wall of the vagina against the urethra. This will empty the urethral (Skene's) tubules and bring to light a very small quantity of pus which is gonorrheal.

We must look for other causes than the amount of salt usually contained in cooking to cause the salivation from calomel. Caracido has published his very careful investigations into the truth of the fact that salt as contained in soups and in cooking is incompatible with calomel and as many think converts the calomel or a portion of it into

the bichloride. His investigations are quite voluminous and seem to be exact. While he admits that salt does, in an amount far in excess of that used in cooking, exercise on calomel a decomposing effect, the amount of bichloride formed is far below a toxic dose. Among the causes of intoxication, he suggests the formation of colloidal mercury, produced by the action of the alkaline juices of the system—the albuminoids, hemoglobin and so forth—but more particularly cell protoplasm.

For the pyrexia of tuberculosis, Loomis advises rest in bed, both mental and physical, in the open air; liquid food and alcohol in an agreeable form; tepid sponging with equal parts alcohol and water; and, in the event of failure of these methods, the use of antipyretic drugs.

A case of thymic asthma is reported by C. Jackson who was able to see through the tracheoscope that this tube was compressed from before backward in a way to interfere with respiration. It would seem that Jackson's observation is the first recorded. Many have denied the possibility of its occurrence, though no explanation has been forthcoming for cases of sudden death in children with symptoms of respiratory obstruction in which post mortem examination revealed nothing else than an enlarged thymus. When the tracheoscope was withdrawn from the tracheotomy opening the child could not breathe, and for a month respiration was possible only through a long tracheal canula which passed down nearly to the bifurcation. The thymus enlarged in this case, as Jackson was able to show by a photograph, was finally removed by means of a transverse incision above the sternum, through which the finger was passed down into the mediastinum, the child being etherized through the tracheal canula, without which the operation could not have been done. This instrument was removed on the eighth day. There was never any stridor whatever after the operation; and three months later the boy was in good health.

Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies, has a peculiarly happy effect; particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination. After fevers, inflammations, etc., there frequently remain various painful and annoying conditions which may continue, namely: The severe headaches

which occur after meningitis; a "stitch in the side" following pleurisy, the precordial pain of pericarditis and the painful stiffness of the joints which remain after a rheumatic attack—all these conditions are relieved by this combination called "Antikamnia and Salol Tablets" containing $2\frac{1}{2}$ grains, each of antikamnia and of salol and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol neutralizes the uric acid and clears up the urine. This remedy is a reliable one in the treatment of diarrhea, entero-colitis, dysentery, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two antikamnia and salol tablets every three hours will give results that are gratifying.

The following is a copy of a letter received from Mariani & Co.:

New York, September, 1907.

Dear Sir:

The American Druggist, August 19, 1907, in reply to a query, erroneously stated that Vin Mariani is regarded by the Health Department of New York as a cocaine preparation, and can only be sold under restrictions of the anti-cocaine ordinance.

Upon our protest that this was a misstatement of fact, injurious to us and to the trade handling Vin Mariani, the publishers in investigating the source of their information submitted the question personally to Dr. Darlington, the Commissioner of Health, who promptly repudiated the statement as unauthorized. He further said that "Vin Mariani, under the new label adopted by the manufacturers, is not regarded as a cocaine preparation, and can, therefore, be sold as freely as any other medicated wine that does not contain cocaine."

In a retraction of their misstatement, the editor of the American Druggist, August 26, 1907, referring to the status of Vin Mariani under the various State laws, sets forth the opinion of the New York Board, and concludes: "We have no doubt that the Health Departments of other cities throughout the country will be influenced by the judgment of the New York officials, and the precedent established by them will be followed generally."

There is, therefore, no reason whatever why Vin Mariani under this new label should not be freely sold in this city, as such sale is absolutely legal.

Very respectfully,

MARIANI & CO.

Among the many intractable sequelae of gonorrhea pyelitis holds a prominent place. The pelvis of the kidney is practically inaccessible of access, except through the urine,

and a chronic inflammatory process will linger there indefinitely, unless properly treated.

The great difficulty is to find a remedy which will overcome the disease without injuring the delicate structure of the kidneys through which it has to pass. The balsams are about the only drugs which fulfil these requirements. We invite your attention to the following prescription:

R Oil santal.
Oil copalba.
Oil cubebs, aa. minims. 5.
Salol, 3 grains.

M.

This is one of the most effective combinations possible, as it is mildly stimulating and antiseptic. It can be obtained already prepared, in the list of the Cherry Capsule Co., of Baltimore, Md.; it is called the C. C. and S. S. capsule.

The Enlarged Edition of Webster's International Dictionary, recently issued, brings Webster again abreast of the growth of the language and again confirms it in its position as the one great standard authority. A decade has passed since the International was first published and the years have been full of changes and growth in life and knowledge and achievement; changes that have been reflected in the language and that must now be registered in the dictionary.

25,000 New Words and Phrases have therefore been added to the International to include the new words that have come into literary use, the old words that have changed their meanings, the obsolete words that have been revived.

The Same Ideals and Principles, so thoroughly approved by experience, which were followed in the body of the book, governed the work of the supplement. There has been the same survey and scrutiny of a great mass of words, the same careful selection of such as merit a place of permanence, and the same studious and thorough explication of meanings in the forms most easily understood.

"How to Care for the Baby," is the title of a handsomely illustrated book (32 pages), which is being sent free to physicians and mothers. It is devoted to valuable information on such subjects as: "When the Baby Comes," "What to Feed," "How to Feed," "When to Feed," "Growth and Development," "Abnormal Conditions," "Breast Milk and Weaning," "Bathing the Baby," "How to Clothe the Baby," and "The Hygiene of the Baby's Home." In fact no family should be without this book for it contains helpful suggestions that can be put into practice every day. Any physician may have a copy free (sent prepaid) by simply sending his name and address on a postal card to Smith, Kline & French Co., makers of "Eskay's Food," 466 Arch street, Philadelphia, Pa

THE New Albany Medical Herald.

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Old Series Vol. XXV, No. 324.
New Series Vol. XIV, No. 195.

New Albany, Ind., December, 1907.

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ARTICLES.

END RESULTS IN BENIGN LESIONS OF THE STOMACH SURGICALLY TREATED.*

By John C. Munro, M. D., Boston, Mass.

In making this analysis and cross analysis of 150 benign stomach lesions, the patients have been followed from the operating room to the present time in all but a few unimportant instances. Nearly all have come in the service of Dr. Bottomley or myself at the Carney Hospital, so that the use of the term end result is limited to a space covering four years. We believe, nevertheless, that that is ample time to settle the question of success or failure in a preponderating majority of cases. I have tried not to err on the unfavorable side in making my deductions. I have balanced each case as judiciously as possible, allowing for the personal element and for the morale in individual instances, as influenced by long and fruitless medical treatment.

Of the total number of 150 cases, 87 showed gross ulcers in the stomach, in the duodenum, or in both. Sixteen cases belong to the class of so-called medical ulcer, where no gross palpable lesion could be found at operation. Twenty-five more exhibited well marked adhesions without evidence of an active ulcer. Among our earlier cases there were 15 so-called neuroses, and, finally, we had 9 cases classed variously as ptosis, spasm of the pylorus, etc.

There are many types of gross lesion in which we have secured immediate and permanent benefit from the operation. Among these we should include, first of all, congenital pyloric obstruction, and perforated chronic ulcer. The wisdom of surgical intervention in cases of this class is so self-evident that we need not discuss it further. As to the question of immediate gastro-enterostomy in perforation, we believe that if, at the time of primary operation, the condition of the patient permits, an anastomosis is wise because it shortens convalescence and obviates the necessity for a secondary

operation. The latter, however, gives good results and should be urged when patients have survived the preliminary operation. We have obtained good results also in (a) active ulcers near the pylorus but not necessarily occluding it; (b) in ulcers of the duodenum, with an occasional exception, which will be considered later; (c) in the gross chronic ulcers of the lesser curvature and anterior wall, in the pyloric half of the stomach, especially if there is active hemorrhage; (d) in some cases of saddle ulcer; (e) in ulcers of the posterior wall, near the cardia, that infiltrate towards the upper edge of the stomach; (f) in ulcers of the lesser curvature when combined with adhesions that interfere with the gastric motility; (g) in some ulcers of the posterior wall when the pylorus is not mechanically interfered with; (h) in some ulcers at the esophageal angle of the lesser curvature; (i) in ulcers of the great curvature; (j) in hour-glass stomach; (k) in stricture of the pylorus; (l) in thickening of the pyloric ring without evidence of an active ulcer, and lastly (m) in dilated, sagging stomachs secondary to some recent or early process in or near the pylorus, which mechanically interferes with the evacuation of the gastric contents.

In analyzing the partial successes in our gross ulcer cases, one must accept the patient's value of a disturbing symptom with some latitude. An invalid who, for years, has dally watched her digestive apparatus, will give undue prominence to eructation of gas, or to occasional attacks of vomiting while able, nevertheless, to eat heartily, to work hard and to maintain a normal body weight. In several failures in those types which, a priori, should have been completely cured, we found either a neurotic strain or some intercurrent disease, such as a severe cardiac asthma. A patient with a double hour-glass stomach, or with extensive ulcers and widespread adhesions, would not be completely cured, because restoration to a normal motility and to a normal secreting mucous membrane would be impossible on the face of it. Such patients, however, complain of symptoms so much less severe than those which obtained before operation, that we feel reasonably satisfied.

We have had definite failures in two duo-

* Read before N. H. Medical Society.

denal ulcers and in one saddle ulcer, the condition being just as bad as it was before operation. From our experience in similar types, we had expected perfect results. To these failures we must add two cases of sudden bleeding (one being fatal) after complete relief for a year following gastro-enterostomy for duodenal ulcer. We also had a late, fatal hemorrhage in a case of extensive ulcer embracing both walls of the stomach. Experiences of this sort give us strong reasons for considering Rodman's plea for a more frequent excision, not only on the basis of relieving symptoms, but to prevent malignant degeneration and late hemorrhage.

Among our gross ulcer cases there were 4 deaths directly attributable to technical failures. These came in the early period of our work. Other deaths were independent of the operation itself but consecutive to it. Patients that came to us after long periods of persistent vomiting were bad surgical risks, not influenced either way by a gastro-enterostomy. This type, among others, we have learned to leave alone. The deaths in congenital obstruction and in perforation of chronic ulcer speak for themselves. In every case delay had been carried far beyond the limit of safety, and operation was advised as a dernier ressort. One patient with chronic anemia, whose hemoglobin was estimated at 15 per cent. died definitely from anemia, but, as we had saved a patient with acute anemia of corresponding degree by anastomosis, we felt justified in running the operative chance. Relapses after temporary relief took place in three cases. We can give no satisfactory explanation. Adhesions that kink the jejunal loop, peptic ulcer or other causes suggest themselves. That the anastomosis has not closed we feel very confident.

In 16 cases of so-called medical ulcer we found, as a rule, hemorrhage from the entire mucous membrane or from localized areas, but without any visible lesion. Every stomach, however, was not opened, the diagnosis being made on the clinical evidence of severe, acute, hemorrhages, or persistent, chronic bleeding without palpable or visible lesion encountered at operation. Leukemia and other general diseases were ruled out so far as lay in our power. We found an open, soft pylorus in every instance. If there were ptosis or other evidence of a stomach draining itself poorly we obtained, by operating, a relief that was never more than incomplete. In two cases of medical ulcer we found the calcareous mesenteric glands to which Mayo has called our attention. Two alcoholics with severe hematemesis died promptly after operation from persistent vomiting. One woman with the typical history and symptoms of ulcer had persistent vomiting after a short-loop anastomosis. Pylorotomy was then done

in desperation, but she continued to vomit steadily to death. Experiences of this kind have taught us to close the abdomen when we are satisfied that there is no gross ulcer, no pyloric obstruction nor other crippling upon the vessels, helps to orce the blood lesion. Without such positive evidence it is best to stop meddling with the stomach. If, in the so-called medical ulcer, there is functional interference from ptosis, minor adhesions or other cause, it may be wise to make an anastomosis, but the surgeon need not count on the brilliant result that comes with typical ulcer and stenosis. Can we differentiate a medical case that is bleeding before operation? We believe that it is not always possible to do so. It is not infrequent that patients of this class are referred to us lacking the picture-complic of gross ulcer, and we are accustomed to refer them back to the medical wards for treatment. On the other hand, one of the largest ulcers that we have ever seen gave so typical a picture of the neurotic medical ulcer that we operated only on the principle of "when in doubt, operate."

In 25 cases of adhesions without evidence of an active chronic ulcer, we obtained excellent results in all but 6, and of these 2 complain only of some eructation of gas. Two patients with persistent vomiting before operation continued to vomit until death two and one-half and four weeks later. The adhesions for which we operated were, for the most part, firm bands or masses that extended from the pylorus or duodenum to the gall-bladder region. In many the pylorus was open but the functions of the stomach were evidently so interfered with that some relief to the food current was imperative. In a few we found the stomach dragged down by adhesions of the omentum to the pelvic scars of former operations. We often found merely the induration of an ulcer active at some former period, but at other times the adhesions were too dense and extensive to allow proper examination. Intercurrent gall-stones or other surgical lesions were dealt with at the same operation.

The worst subjects for interference were those classed as neurotics. Believing at the beginning of our work that the lack of gastric drainage was the main factor in the production of the protean symptoms in these patients, we undertook to relieve the distress by establishing free drainage. Most of the cases were made worse. In this respect it is interesting to note that quite recently, after exploring a neurotic that had been vomiting for a long time, and finding no causative lesion, the symptoms persisted until death two and a half months later. Three neurotic patients derived some benefit; one had a dilated, prolapsed stomach, another had a dilated duodenum and stomach, while the third had typical cardiospasm

secondary to an irritable pylorus which was relieved by a Finney pyloroplasty. Some of these neurotics had severe hemorrhages coming periodically both before and after operation when the neurotic storm was at its worst. A gastro-enterostomy would be followed in the course of a few weeks by regurgitation of bile. If we then made an entero-anastomosis and, perhaps, later closed the pylorus, the result was just as bad. Recently one of our most annoying victims allowed us to restore his gastric apparatus to its original anatomical arrangement with instant relief. Many of the patients had stomachs that were moderately dilated or prolapsed. Others exhibited scars on the serous coat, but in not a single case did we find a gross ulcer or other crippling lesion. Sufferers of this class are still sent to us with remarkable frequency by the internist who has been battling with the condition for years, but it is needless to say, that we refuse to interfere.

If, now, we study the results as they bear on the type of operation employed, it is evident that the simpler the technique and the nearer it follows anatomical lines, the better the result. The first method used is that commonly known as the Moynihan, beginning with the long and ending with the short loop. In this method the gastric and jejunal currents pass to the right, that is, in the same direction, the stomach opening being slit-like with its long axis practically in the direction of the food-current. Success with this operation came in patients with gross lesions where the establishment of drainage was a prerequisite factor. Failure naturally came in the medical ulcer and in the neurotic, but there were enough of the adhesion and gross ulcer type that had regurgitant vomiting to make us look for a substitute. Occasionally we were induced to reoperate, making an entero-anastomosis with a fair degree of success. We then tried the posterior gastro-enterostomy with primary entero-anastomosis, with rather better success, but still having an occasional case of regurgitation. Going then to the Roux operation-in-Y, modified by making both anastomoses with the clamp and suture, we were gratified by almost complete success. Unfortunately, however, the technique is somewhat complicated. We tried this method on one of our worst neurotics, feeling that bilious regurgitation would be impossible, especially if the pylorus were closed artificially. Nevertheless we were disappointed to find that almost constant regurgitation ensued. This demonstrated that the mechanics of a gastro-enterostomy may play a very important role under certain circumstances, but conversely, we believe that almost any form of anastomosis will cure many cases of gross lesion. Following Mayo's lead we then adopted the no-loop operation, first with the long-

itudinal, gastric slit, and later with the opening in the stomach transverse to the gastric stream. Here the jejunum points to the left as normally obtains in the majority of cases. With each modification our results improved and we found less and less regurgitation until now we look for success as regards function if we select the proper cases for gastro-jejunostomy at the outset.

In the meanwhile we had used Finney's method of pyloro-plasty in suitable cases, preferring it to Kocher's gastro-duodenotomy, as being simpler and more rational. The immediate results were more slow to manifest themselves in the individual case, but the end results were good. Finney, in a recent report of his own cases, shows that the method is suitable to a wider range of lesions than came within our application. He has obtained good results in active ulcers of the main body of the stomach, etc., and his conclusions are well worth consideration.

Excision of the ulcer-bearing area, which is likewise the cancer area to a great extent, would be the ideal process in all suspicious cases beyond middle life. But is it possible to insure against a fatal operative outcome as in simple gastro-enterostomy? Unfortunately many patients come late, with little power of resistance owing to prolonged starvation, anemia and loss of courage. We can not yet feel that our own technique is sufficiently reliable to make us have no hesitation in the choice of operation. Certain ulcers, extensive, brawny and of poor tissue to make repair, should be excised when by so doing the gastric function will not be impaired. In others we should make a partial gastrectomy, being willing to assume some additional risk if we can fend off a probable malignant degeneration or prevent a late hemorrhage from an ulcer that is not capable of healing. This latter calamity happened in a few of our cases. The decision for the type of operation in such instances is individual, depending upon the surgeon's experience as well as upon the patient's condition.

We must confess that there are certain ulcers which at operation can not be differentiated from cancer. In patients of this class, reduced by starvation and anemia, we have lacked the courage to perform a radical operation and have been agreeably surprised to find that lapse of time has settled the diagnosis of a benign lesion when our clinical diagnosis was that of carcinoma. Fortunately the reverse has happened much less often. As a rule the typical cancer is unmistakable, but in our experience of over 100 operations for cancer we have had only about 10 in which radical excision was possible; a proportion discouragingly smaller than that which has come in the experience of Kocher, Mayo and others.

After reopening a number of abdomens at

varying intervals after anastomosis, we have failed to find any indication of closure of the opening when made with the clamp and suture. On the other hand the openings seem to enlarge, and this whether there is a functioning pylorus or not. With the Murphy button we have been less fortunate. Twice have we been obliged to substitute the clamp and suture anastomosis. One of these took place in a gastrectomy for cancer where there was no pyloric opening, and the other in a posterior operation for acute hemorrhage. For this reason we make use of the button only in cases where speed or inaccessibility is an important factor. We have no definite data as to the occurrence of peptic ulcer. Such a lesion may explain the late unheralded hemorrhage in two of our cases of duodenal ulcer. Rarely coming in the posterior operation, as statistics show, we believe the fear of this accident is a small contra-indication in cases otherwise suitable for operation.

The simplicity, cleanliness, rapidity and safety of the clamp and suture operation are strong arguments at the present time against any substitutes. Complicated or so-called time-saving instruments, are unnecessary. A pair of simple rubber-covered clamps and a needle and thread should suffice in practically all cases. We prefer linen in the serous layer and fine chromic gut in the musculo-mucous layer. Either given intelligently and in minimum doses, closure of the omental bursa against hernia and the elevated head position after operation assist in reducing the danger of the operation per se to a minimum. It is conservative to maintain that herein we have a very safe therapeutic remedy for most of the benign lesions of the stomach and duodenum. Further study, broader operative experience combined with associated medical observation, will soon enable the physician as well as the surgeon to accept suitable cases with a large promise for immediate and permanent cure. When relief does come it surpasses that obtained in almost any other type of suffering. It dispels the pain and distress of dyspepsia, the agony of slow starvation and the terror of hemorrhage or perforation. Perhaps more than all it eliminates in a larger proportion of cases than is commonly realized, the chance of engrafted malignancy.

STRICTURE OF THE ESOPHAGUS.*

By Edward W. Peterson, M. D., New York City.

The diagnosis of esophageal stricture is simple. By means of bougies, the patency or non-patency of the canal can readily be

determined. The origin of nature of the stenosis in many instances, is not so easily settled. The treatment of this condition is usually difficult, always protracted, and is calculated to tax the patience, the ingenuity and skill of the surgeon.

My interest in this subject was first aroused during my interne service in the Post Graduate Hospital. While in charge of the babies' ward, there were six cases of esophageal stricture under treatment—all due to the accidental swallowing of lye. The patients were under the care of Drs. Lloyd, Dunham and Putnam. It was my privilege, at this time, to study these cases, to observe the methods and technique of the above mentioned surgeons, and to personally carry out many of the details in connection with the treatment. Dunham was then conducting experiments, which have since resulted in the perfection of instruments and methods, which will be alluded to later.

We may classify strictures of the esophagus with reference to their origin, as follows: (1) Congenital strictures. (2) Compression strictures. (3) Obturation strictures. (4) Cicatricial strictures, and (5) Spasmodic strictures—or we may use König's classification which divides them into two general classes:

(1) Obstructions to the passage of food, located within the esophagus, viz., inflammatory, spasmodic or cicatricial strictures, foreign bodies, tumors and diverticula.

(2) Obstructions to the passage of food, located outside the esophagus, especially tumors of the thyroid gland bronchial glands and the mediastinum, aneurysms, etc.

No matter from what cause the stricture arises, there are certain symptoms which are constant, varying in degree, of course, with the nature and extent of the stenosis. These symptoms are increasing dysphagia, persistent regurgitation and progressive emaciation. In the early stages dysphagia accompanies the taking of solid food and gradually increases until soft foods, and finally liquids, are swallowed with difficulty. Complete obstruction is apt, ultimately, to follow if treatment be neglected. Regurgitation may be immediate, or follow some time after the ingestion of food or liquids—depending largely on the tolerance and capacity of the esophagus above the point of obstruction. Emaciation is a starvation symptom for which insufficient food supply to the economy is responsible.

In obtaining the history of a case of esophageal stricture the following points should be brought out: The age of the patient, the date and character of the onset of the symptoms, and the subsequent course of the difficulty; whether caustic acids or alkalis or foreign bodies have ever been swallowed; whether the individual ever had syphilis, severe typhoid fever, or marked digestive trouble with accompanying dys-

*Read before Medical Association of the State of Alabama.

phasia; whether there ever occurred dyspnea, dull boring pain in the vertebra, rib or sternum, or regurgitation of material mixed with blood, pus or fragments of a neoplasm. These points are essential for a differential diagnosis.

Gradual development of symptoms, without cachexia, points to cicatricial stenosis; intermittent dysphagia with neurotic history would indicate cardiospasm or spasmodic stricture; a spontaneous onset, with rapidly developing cachexia, would suggest malignant or syphilitic obstruction.

With a history of swallowing a foreign body, followed by partial or complete occlusion, the diagnosis of foreign body obturation is obvious. A history of swallowing corrosives with subsequent development of symptoms, would indicate a benign cicatricial stenosis; a history of syphilis with nothing else to account for the symptoms would suggest syphilitic ulceration; advanced age, cachexia and rapid emaciation, out of proportion to the degree of stenosis, would point to malignancy. Where the first part of the meal is swallowed with difficulty (with accompanying sense of fullness in the neck) the balance passing down easily, the probabilities are that there is a diverticulum present. In such a case, food may remain several days in the pouch, then be forced out in an undigested state. By a careful physical examination of the neck and chest (including the use of the X-ray) growths outside of the esophagus producing compression stenosis can be made out. It must not be forgotten that in the lower end of the esophagus, there is sometimes found typical stomach epithelium in the pavement epithelium of the esophagus, and that here the "ulcus ex digestionis," similar to gastric, pyloric and duodenal ulcers, may occur.

The physical examination of an individual with esophageal stenosis, should include the ordinary methods of diagnosis, viz.: Palpative percussion, auscultation, etc., and in addition the use of bougies, the X-ray and the esophagoscope. The passage of bougies will determine the site of the stricture—also the patency or non-patency of the canal. Begin first with large instruments and gradually decrease the size until one is passed or until the non-patency of the esophagus is established. Use the greatest caution and gentleness in these efforts; absolutely no force should be exerted, for it is very easy to penetrate the wall of the gullet and thereby to set up fatal inflammation. Do not be satisfied with one examination, but with various sized instruments, with the patient's head in different positions, make repeated attempts to pass the obstruction. By administering a thick bismuth paste, and taking a radiograph of the chest and neck, it is possible to obtain accurate knowledge of the esophagus above. In all of the X-ray pictures which I have examined, there has

been more or less dilatation or sacculation of the canal above the stricture. It is also possible by means of the X-ray, to diagnose tumors, aneurysms, effusions, etc., located outside of the esophagus. In selected cases, the esophagoscope should be used. The introduction of this instrument is somewhat difficult and not without danger. In the hands of an expert with a properly selected case, just as accurate a picture of the esophagus can be obtained as of the bladder with the aid of the cystoscope.

Within the past three years, I have treated eight patients for stricture of the esophagus, as follows: One case of compression stricture, due to the mediastinal sarcoma, for which nothing could be done; one case of carcinomatous stricture, the diagnosis being made from the history and from an X-ray picture of the growth.

Treatment—Permanent gastrostomy with feeding through the gastric fistula; one case of diverticulum, in which the dysphagia and regurgitation were and are yet not sufficiently annoying to warrant operation, treated by the passage of graded bougies; one case of foreign body obturation due to the lodging of a penny in the esophagus of a child. The location and position of the coin were seen with the X-ray, and its removal accomplished by means of an old fashioned coin catcher; four cases of benign cicatricial stenoses, two of which were due to the swallowing of caustic acids and the other two to the ingestion of caustic alkalis. In two of them it was impossible to pass any form of instrument, so in each instance a temporary gastrostomy was performed with retrograde dilatation of the strictures. These two cases to-day are symptomatically cured, for they both have patent esophagi, which allow of the easy passage of all kinds of food.

The third case was an insane patient who drank sulphuric acid with suicidal intent. The relatives of the patient refused to consent to the measures which were advocated, so no treatment could be carried out.

The fourth patient was a little girl who swallowed lye by mistake; her stricture was neither extensive nor tight, and yielded readily to ordinary bougie dilatation.

I have here the histories of these patients, but with your permission I will read, in detail, but one of them.

Case IV.—C. H., male, aged 22 years, plumber by occupation. Last summer was employed as "spieler" for a Coney Island show. He has kindly written an account of his accident, and I submit it in his own words:

"On the 10th of July, 1905, I drank nitric acid by accident. I felt very intense pain in my mouth, also in the esophagus; about forty seconds after I drank the acid, I was given a large glass of milk to drink, and a few minutes later I was taken to the Emer-

gency Hospital of the Park. There they gave me some kind of stuff to cause me to vomit and magn. sulph. sol. to drink. They also washed out my stomach with the same solution. I was then transferred to the King's County Hospital. During all this time I had very bad pains in the stomach, I felt weak and very thirsty. My bowels moved very often, which I think was the magnesium sulphate. After my stomach was washed I had pains in swallowing, just as if I had caught cold and had a sore throat, but I was able to swallow just the same, except for the pain I had. I also found it very hard for me to speak.

"That night I could not sleep, because it was impossible for me to rest my head; no matter how I laid, my neck pained me terrible. That night I drank a lot of water, but it all came right up again. The next morning I still had pains in my throat, but I was able to swallow. I also stopped vomiting up the next morning. The pain in my throat kept up or about six days, then gradually went away. For three days and nights I was constantly kept awake by hiccoughs.

"About eight days after I drank the acid, I noticed that while eating meat or so-called hard food, it did not slide down so very easy, and gradually it got so that I was only able to eat soft food, and after a few weeks it got so that I had to live on fluids, and at times, fluids would not even go down."

In the latter part of August, this patient came to my clinic at the Post Graduate Hospital, giving the above history. Several unsuccessful attempts were made with various sized instruments, to pass the stricture, which was located nine inches from the teeth. Finally, a small flexible bougie was introduced, and after a number of days of treatment, a number 26 instrument could be passed. Following an attempt at division with an esophageal divulsor, the patient developed a cellulitis of the neck, and for several days his condition was serious. Fortunately no ill effects resulted, but the lesion was taken to heart and the division abandoned. Later, the patient went away from the city and for a time was lost sight of. When he returned, he was greatly emaciated, and unable to swallow water, except a spoonful at a time, and this amount very slowly. All attempts to pass instruments failed. Even filiform bougies could not be introduced. The patient attempted to swallow a perforated No. 4 shot with a thread attached, but without success.

Dunham has demonstrated that where a patient can swallow water, a thread can be washed through the stricture. This fact was taken advantage of, and a thread was washed through the stricture into the stomach of the patient. A temporary gastrostomy was performed, the end of the thread fished out and to it attached a strong fish line, which was drawn up through the esop-

hagus out of the mouth. With this guide it was easy to draw up the wire spindle bougies, and as long as there was no marked resistance, to gradually dilate the stricture. Later, with a full sized instrument in place, an internal esophagotomy was done, using the Abbe string method to chafe through the stricture. This patient to-day is free from any difficulty in swallowing, has gained about fifty pounds in weight and each day he passes a No. 42 flexible bougie.

In the management of esophageal strictures, no hard and fast rules can be laid down. The treatment necessarily must be directed to the individual case. For the relief of compression stenosis, due to aneurysms, or tumors outside of the esophagus, nothing can be done, unless the growth happens to be accessible. In selected cases, diverticula located in the cervical region, can be removed and the resulting defect in the esophagus closed by suture. Spasmodic stenosis should be treated by suggestion, appropriate internal medication and by direct instrumental division. In malignant stricture if the disease be accessible and recognized early, resection and anastomosis should be attempted. Where this procedure is unwise or impossible, a permanent valvular gastrostomy should be performed, provided the patient is fully acquainted with the annoyances and discomfort associated with a gastric fistula, and of the ultimate result to be expected.

In foreign body obturation, by the use of certain instruments, viz., hair probangs, coin catchers, special forceps, etc., it is usually possible to either withdraw the offending object or to push it into the stomach. If unsuccessful, external esophagotomy of combined internal esophagotomy and gastrostomy must be resorted to.

Benign cicatricial strictures are the ones most commonly met with and in this class of cases we can accomplish something definite, something permanent, in the way of a "symptomatic" cure. The danger attendant upon the forcible introduction of bougies, rapid instrumental division, internal esophagotomy with sharp cutting instruments (on the plan of the urethrotome) are too well known to require either emphasis or repetition.

The treatment which is recommended is as follows:

(1) In cases where cicatrization is not extensive, and where the stricture is yielding, the systematic passage of ordinary flexible bougies and the hollow guide bougies, will suffice to keep the esophagus patent and will eventually overcome the tendency of the scar to contract.

(2) Previous strictures, which do not really yield to the ordinary stretching methods, should be treated by internal esophagotomy. This is best accomplished by the Dunham string esophagatome. The guide bougie

is passed through the stricture, and an olive larger than stricture is engaged. By a sawing movement the string chafes through the structure, without danger of hemorrhage. This procedure is to be repeated after a few days, until the lumen of the esophagus is of satisfactory caliber.

(3) In cases where the introduction of an instrument through the stricture is impossible. If the patient can swallow water, it is possible to wash a thread through the stricture into the stomach. An ordinary drinking tube, a thread and a glass of water are all that is necessary to accomplish this result. A gastrostomy (temporary) should be performed, and the thread drawn out through the gastrostomy wound. A double linen fish line should be attached to the thread and drawn up through the esophagus into the mouth. With one of these lines, draw up the wire-spindle bougies of various sizes, beginning with the smallest, until a spindle is arrested. Pulling the wire taut, thus putting the stricture on the stretch, the other fish line is pulled to and fro, until the stricture is chafed through and the spindle is allowed to pass upward into the mouth. Leave a string in place, and repeat the process a few days later until sufficient dilatation has been obtained. Remove the string and the gastrostomy wound will heal spontaneously.

In conclusion, I wish to emphasize the following points:

1. That the forcible introduction of bougies, rapid instrumental division, internal esophagotomy with sharp cutting instruments, etc., are positively dangerous and should not be employed.
2. Before attempting any dilatation of an esophageal stricture, a guide bougie or string should be passed.
3. That the treatment does not end with the operation. Strictures are prone to relapse, therefore vigilant supervision must be maintained over each case, until such tendency has disappeared.

TREATMENT OF COLD ABSCESES.*

By Hiram Hunt, M. D., Greenville, Me.

We want to consider to-day:

1st. The treatment of cold abscesses. When should it be radical and when conservative?

2d. Do our modern antiseptic methods offer any encouragement in attacking them?

3d. Is it the cardinal rule of surgery to attack pus wherever it may be found?

The cold abscess, as you very well know, is the typical tubercular abscess; its contents are sterile; tubercle bacilli can not usually be found in its contents but may be found in its walls; it may exist for years and then be absorbed; it is characterized by

the absence of pain, redness and heat; in short, it is exactly the opposite of the acute abscess, and whatever symptoms exist are usually due to the initial lesion and not to the abscess itself. This is the abscess which has caused so much discussion in years past. Look over the textbook of ten to twenty years ago. In Holmes' Surgery we find this case, which I will quote as a sample:

"Male, age 28, blacksmith; entered the hospital with a psoas abscess due to a disease of the spine, which had begun when he was 16. The abscess was opened but did not heal; it continued to discharge pus and he died of hectic exhaustion." Evidently mixed infection took place after the abscess was opened and was the direct cause of death. This was the result twenty years ago and the results are not much different to-day when treated by incision.

Numerous methods were recommended to prevent infection. Gross recommended giving an anodyne just before the operation to prevent undue reaction, which, he says, will otherwise be sure to occur and to lead to great hectic irritation and exhaustion of the vital powers. Another means advised was to open the abscess while the patient's body was immersed in water, to prevent the introduction of air, which was thought to be the medium of infection. Then as now, post-operative infection was recognized as the thing to be avoided. With the advent of antiseptic methods and sterile dressings, much was hoped for in the treatment of cold abscesses, but the results have been disappointing. Senn says in a few cases he has succeeded in preventing mixed infection; but in the larger number of cases infection has occurred in spite of every care.

In small abscesses, as in the neck or chest, it may be possible to keep them sterile; but in the profusely discharging abscesses of the spine or hip, in the inguinal, femoral, or gluteal regions, especially in children, it is practically impossible to prevent infection, when they are treated with open incision and drainage.

How seductive it is. A cold abscess presents, possibly not large or troublesome; but the impulse to do something is irresistible; the abscess is opened or aspirated, and great is our satisfaction when the pus runs freely; for we have obeyed the cardinal rule of surgery and evacuated the pus. Possibly with a curette we dig a few holes in the walls to give the dormant bacilli a chance to migrate; we irrigate it, for what reason I don't know, and we put on a good sterile dressing and feel that we have treated the case *secundum artem*. Possibly everything may go well; but if it resembles some I have seen it will very likely go wrong and the patient will go the rounds of the doctors and hospitals with an obstinate sinus, and if the focus heals and the patient lives. It will not be due to our energetic treatment in

*Read before Maine Medical Association.

evacuating the pus. Had the treatment been directed to the initial lesion and the abscess been evacuated only when positively indicated, it would have been more rational. Fortunate is the medical man who has not had some unfortunate experience in unnecessarily evacuating a cold abscess.

Wyeth says: "Old abscesses which offer no deformity or marked discomfort to the patient may be left alone."

Park says: "To simply incise it or ineffectually scrape it is to do a worse than useless thing, and one should never attack it unless he is prepared to thoroughly extirpate it or destroy its integrity, and in this way finally dispose of it." As Billroth has pointed out this is impossible in all vertebra and most hip abscesses.

Henle, in the Von Bergmann Surgery, says: "At the present time simple incising of cold abscesses has been practically abandoned and routine opening of them is to be condemned." He favors the iodoform treatment; but admits that in a certain number of cases, in spite of the iodoform treatment, sinuses will develop and says "When there has been considerable secondary infection it will be almost impossible to check the suppuration and the patients succumb sooner or later."

The iodoform treatment consists of aspirating through good tissue and injecting 10 per cent. iodoform in glycerine. At the clinic at Breslau, they report 73 per cent. recoveries and Bruns reports 80 per cent. recoveries under this treatment. On the other hand, Shaffer reports 27 per cent. recoveries without rupture and 65 per cent. recoveries after rupture; making 92 per cent. recoveries without surgical intervention. Gibney, in an article read before the American Medical Association last June, at Atlantic City, says the iodoform treatment is a failure and has been abandoned in the New York hospitals. As this is the only treatment advanced with any degree of confidence, it follows that we have no treatment that justifies us in interfering with a cold abscess unless it is positively indicated.

We know many things about cold abscesses; we know about their contents and the tubercle bacilli in their walls; we recognize, as did our forefathers, the disastrous results of mixed infection, and we know that in a large percentage of cases, infection will occur after operation, no matter how much care is used; we know that the abscesses is but an accompaniment of and secondary in importance to the focus.

These are some of the things we know, but there are many things that we do not know; for instance, we do not know that evacuating the pus had any beneficial effect on the initial lesion; we do not know but that the pressure from the contents of the abscess may have some inhibitory effect on the destructive process at the site of the

initial lesion. These questions can not be easily determined.

Ubi pus ibi evacuo is as true now as ever when confined to acute abscesses; but if evacuating pus wherever it may be found is to remain the cardinal rule of surgery, either we must make an exception in the case of cold abscesses, or else we must decide that the contents of these abscesses is not pus, for surely the modern idea is to let them alone if possible. The modern writers call the contents of these abscesses pus. Henle, in the Von Bergmann Surgery, repeatedly calls it pus. Gibney in his writings calls it pus, and in a letter to the writer says we are justified in calling it pus. We know that it is broken down tubercular or syphilitic debris. If we do not call it pus we have no concise term with which to designate it. It is generally considered and called pus.

Conclusions.

1st. When a cold abscess from its location does not interfere with the proper treatment, or from its size does not inconvenience the patient, leave it alone, unless it shows a tendency to rupture.

As Gibney pertinently asks, what harm can a collection of sterile pus do?

2d. When from the location or size or tendency to rupture it demands surgical attention, aspirate carefully through good tissue, and if an incision is necessary after evacuating the contents, sew up and seal the incision; hoping to get primary union.

3d. When the focus is accessible and removable, remove abscess, focus and all.

THE NATURE AND TREATMENT OF DROPSY.

By Dr. Thomas Hunt Stucky, A. M., M. D., Louisville, Ky. Formerly Professor of Theory and Practice of Medicine and Clinical Medicine, Hospital College of Medicine, Ex-President Mississippi Valley Medical Association.

The term dropsy is one which is rather loosely applied to any abnormal accumulation of watery fluid in the body. In more concise technical language we use the word edema when the fluid occurs within the interstices of tissue and ascites when it is free in the abdominal cavity. For accumulations in other cavities special names are used, as hydrothorax, hydropericardium, hydrocephalus, etc.

Edema of the subcutaneous cellular tissue is a very common form of dropsy; it is usually confined to certain regions, but may become general, in which case it is referred to as anasarca. The site in which edema most frequently occurs is in the feet and ankles, next to this is the region, about the lower eyelids.

In a normal state of health there constantly exudes from the blood vessels, especially

the capillaries, a fluid derived from the serum of the blood. This percolates between the cells of all tissues, and is the means of carrying nourishment to all those cells which are not in direct contact with blood vessels. These interstices between the cells are drained by the vessels of the lymphatic system, which are able to carry off easily all the fluid which comes to them under ordinary circumstances.

The composition of this lymph is very nearly the same as that of the serum of the blood. It contains a larger proportion of water and only about three per cent. of proteids. As a rule it contains no fibrin, although it will coagulate upon the addition of fibrin ferment, showing the presence of some of the fibrin elements. Its specific gravity will average about 1.015.

Cohnheim taught that the most important factor requisite to the production of dropsy is malnutrition of the walls of the blood vessels. It is well to keep this in mind, for although in most cases the other causative agents are much more evident yet this element of malnutrition will almost certainly be found to exist in a greater or less degree. It can readily be imagined that the single layer of delicate cells which form the wall of the capillary vessels would be very sensitive to changes in the blood which is constantly passing them. In diseases of the kidneys, the liver and other excretory organs a number of poisonous matters accumulate in the blood to an abnormal degree, and they can not fail to harm this lining membrane. Fevers of all kinds, the presence of bacteria, pus or other products of microbic invasion will produce the same effect. Of course, in these diseases we do not often have dropsy, but the endothelial membrane is in a weakened condition, and a comparatively slight determining cause will bring on this symptom.

An excess of blood in the part may produce an edema. When it is caused by overdistention of the arteries the liability to edema is not so great as when there is a venous stasis. In the former case the capillaries are constantly receiving plenty of fresh blood, while in the latter the same blood remains in the vessels and the endothelium derives but little benefit from it. Valvular disease of the heart is one of the main causes of a general slowing of the blood current and especially of the venous stasis. The pressure from behind, the vis a tergo, of the blood in the veins is never great under the best of circumstances, and when the power of the heart is weakened from any cause this propelling force is reduced to a very low point. In valvular disease of the heart the amount of blood passed through this organ is diminished until a compensatory hypertrophy is established. In the meantime the blood in the veins being

impeded to some extent in front and not forced from behind, flows very sluggishly.

In the leg the blood has to mount some distance against the force of gravity, which greatly retards the circulation. While the patient walks about vigorously the contraction of the muscles of the legs, by pressing upon the vessels, helps to force the blood forward; but such patients can rarely walk with any great amount of vigor, the blood does not receive this extra help, and an edema of the feet and ankles is almost sure to be seen at some stage of the case. At first this is merely a puffiness observed at night after being up all day. The condition spreads from the feet up the legs, becoming greater as the case progresses. After a time the swelling is not entirely reduced even after a night's rest; the parts feel cold and pit upon pressure, the dents remaining for quite a length of time. Unless the case is treated properly this edema will finally involve a large portion of the body, it is an expression of extreme weakness of the circulation, and is rightly regarded by the laity as a very grave symptom.

Allied to this condition in certain ways is the accumulation of fluid in the abdomen. This escapes from the vessels of the mesentery and intestines; it is seen in conjunction with dropsy in other parts, and may come from the same state of cardiac weakness which causes edema of the feet. In many instances, however, it has a special cause in an obstruction to the flow of blood through the liver. As is well known, all of the blood from the stomach, small intestine and most of the colon is gathered up into the portal vein and goes through the liver. Whenever there is any obstruction in this organ the blood is dammed back into the other viscera and its fluid oozes out into the general peritoneal cavity.

A state of inflammation of the liver, bringing an abundance of leucocytes to the organ and causing a swelling of its cellular portion, produces a compression of the blood vessels, thus impeding the circulation. In chronic inflammations the overgrowth of the connective tissue has the same effect but it is carried to a greater degree. In this disease the lumen of the blood vessels is sometimes almost obliterated, and it is in such cases that we find persistent dropsy in the abdomen.

In diseases of the kidneys a large proportion of the poisonous matters which these organs should excrete are allowed to remain in the blood. These injure the walls of the capillaries, as referred to above, and the dropsy first seen in these cases is probably purely from this cause. Later on these same poisons affect the force of the heart muscle and weaken the nervous system, so that we may readily see how a part of the general anasarca sometimes observed in

such cases may be due to circulatory weakness.

The general treatment of these cases depends, of course, largely upon the cause. Where the heart alone is at fault the patient should be put to bed, or at least confined to a chair if he can not lie down with comfort, as frequently happens. Efforts must be made to increase the nutrition of the heart muscle and the efficiency of its nerve supply. To this end we must attend to his diet; such patients have a poor digestion and are often afflicted with diarrhea. The most nourishing and easily digested foods must be given, in as great an amount and at as short intervals as he can digest them. Tonics for the heart and nerves must be administered, but care and judgment must be observed, in their use, for there is grave danger of stimulating the heart beyond its strength.

Digitalis and strychnine are powerful drugs, and their effects must be watched constantly. I have had better results with a preparation called anasarcin, which is a combination of several mild tonics alteratives and diuretics. It is a much safer drug to leave with the patient, and is very reliable in its action; its diuretic effect is one of the best means of reducing the dropsy.

Cases of renal dropsy are frequently helped by the saline purgatives and by any measures which increase the amount of perspiration. The poisons which should be eliminated by the kidney can in a large measure escape through the bowel and the skin, and these means must be used to the point of endurance. As the circulation is always weak it is necessary to administer cardiac and general tonics, and for these patients the same drug, anasarcin, is probably more efficacious than any other.

For dropsy into the abdomen the diuretic action of anasarcin and its tonic effect make it the remedy on which I have depended.

This seems high praise, but the favorable opinion formed will be found in the histories of cases given below, which are only a few chosen at random from my practice during the past year:

Case 1—Mrs. E., married; physical examination, aortic stenosis; no doubt of long standing. Goitre from pubescence. During first pregnancy developed acute nephritis with pronounced general anasarca. Usual remedies tried unsuccessfully. Anasarcin recommended; tablet to be used every three hours. After three or four days treatment, marked diminution of the dropsical effusion, which being carried on during the remainder of gestation, enabled her to go through the parturient period successfully. There have been several returns of the dropsy since this attack three years ago, all of which have yielded promptly by the use of this remedy.

Case 2—Mrs. F., widow, age 67 years. Mitral regurgitation. Chronic interstitial nephritis; general anasarca, with all accompanying and distressing symptoms. Diuretin, infusion digitalis and the general agents proved unsuccessful. Anasarcin, one tablet every three hours encouraged by the use of salines produced decided relief to such an extent that the patient is now going about in comparative comfort.

Case 3—Edwin R., aged 18 years. History of scarlet fever when seven years of age. Aortic regurgitation during attack of scarlet fever with general anasarca which only partially disappeared after months of confinement with the usual remedies. Was placed upon anasarcin six weeks ago; one tablet every three hours until active elimination was secured both by kidney and bowels; then a tablet three times a day. At this time, August 2, 1907, there is no evidence of any dropsy, and to all appearances he seems to be regaining his strength, rapidly.

Case 4—John R., 42 years of age. Has been a spree. Hypertrophic cirrhosis of the liver. Mitral regurgitation; albumen, hyaline casts and granular casts found in the urine. The effusion was so great into the abdominal cavity that it was necessary to aspirate. Four gallons of fluid withdrawn, producing very decided relief, showing evidence a few days thereafter of the return of the edema. He was placed upon anasarcin as above described, in connection with tonics, and has been comparatively comfortable ever since. My observation has been that this agent is serviceable in all dropsical conditions, irrespective of cause—with the exception probably of those which are entirely mechanical in character.

THE PAPILLOMATA AND THEIR DEGENERATIONS.*

By William de Berniere MacNider, M. D.,
Raleigh, N. C.

The papillomata are primarily benign tumors and, as their name indicates, resemble in structure the papillæ of the skin.

The etiology of these growths is in many instances impossible to determine, arising as they do in an apparently spontaneous manner and in some cases tending to disappear almost as rapidly as they occur. In other cases prolonged irritation seems to be a factor concerned in their production. The so-called venereal warts, or condylomata, which are prone to appear upon the genitalia of patients suffering from gonorrhea and uncleanly subjects very likely originate as a result of irritating discharges.

The papillomata, for convenience of study, may be divided into two classes, the hard and the soft. The hard papillomata are

*Read before N. C. Medical Society.

found chiefly upon the skin where they are known as warts; but in some cases this variety is found in the larynx. Their most common site is the skin of the back, neck, face and hands.

The general appearance of these growths with one exception, presents nothing of especial interest. They vary much in size, ranging all the way from that of a pin's head to that of a good-sized marble, and are generally found in clusters, but sometimes singly. The surface has a rough feel, and upon a close examination we can find small point-like projections with intervening fissures. It will be noticed that some of these tumors differ markedly in appearance from others in that they are pigmented. The color is only slightly noticeable in some cases, being a light brown, while in others the color is dark brown or even black. The degenerative changes in this variety of papillomata are especially interesting and will be referred to later.

The structure of the hard papillomata is simple, consisting of projecting tongues of connective tissue containing blood vessels and covering this frame work are several layers of epithelial cells. In the skin the connective tissue and epithelial covering follow the type of normal papillae, and so we get a growth which consists of an aggregation of these new formed papilliform bodies.

The soft papillomata have essentially the same structure as the hard growths with the exception that the individual papillae have a marked tendency to give off branch-like processes resulting in the formation of a cauliflower growth which is very vascular. The soft papillomata are found principally upon the mucous membrane of the bladder, gastro intestinal tract, larynx, nasal chambers and pelvis of the kidneys. In this variety of the tumor the connective tissue is less abundant, they frequently have a distinct villous formation and the epithelium covering the villae follows the type of origin in which the papillomata is situated. If this be on the intestinal mucous membrane, the epithelium will be of the simple columnar variety; if in the bladder transitional epithelium will be found.

The degenerative changes of the papillomata are of especial interest. The chief ones are sarcomatous and carcinomatous. A discussion of all the degenerations would consume too much time and therefore the sarcomatous changes will be considered somewhat in detail with a report of several cases, while the other degenerations will be dismissed with only a passing notice.

A papillomata or wart beginning to undergo sarcomatous changes exhibits two symptoms which are noticed by the patient as well as the examiner, e. g., an increase in the size of the tumor and pain. These symptoms are most likely to appear in middle

aged or old people and the exciting cause is difficult to determine. A history of some injury or continued irritation to the growth is sometimes given, while in other cases no such history can be obtained. The tumor tends to increase in size and with this the pain becomes more severe. In both cases to be reported superficial ulceration was noticed. Upon a microscopic examination the following changes are observed; the wart has lost in part or altogether its papillary arrangement; the stroma has decreased in amount while the cellular element has increased. In place of finding a growth formed of numerous papillae we get a mass of cells, most frequently of the small round cell variety. The stroma is scanty while the blood vessels are numerous. In simple papillomata the blood vessels are found in the central stem-like mass of connective tissue, but in a papilloma which has undergone sarcomatous changes the blood vessels are found surrounded by the cells which form the tumor. The walls of the vessels are very thin and in some cases the vessel-wall is formed by tumor cells. In such cases it is not difficult to see how easy it is for metastasis to take place by portions of the tumor being carried to distant parts of the body in the blood stream.

Case No. 1.—R. H. D., colored, age 53, laborer, family history good, there being no evidence of malignant disease. Personal history good up to the present time. For ten to fourteen years has had warts on right hand and forearm. One of these growths on posterior surface of first phalanx of middle finger, commenced to increase in size and accompanying this there was considerable pain extending from the finger up into the right axilla. There was no history of any injury. When I first saw the patient the growth was about $1\frac{1}{4}$ inches in diameter, fixed, the surrounding tissues indurated and the surface of the growth beginning to ulcerate. The patient had lost considerable flesh and was unable to sleep on account of the intense pain.

The very probable nature of the trouble was explained to the patient and an amputation of the middle finger advised, to which he consented. The finger was removed at the metacarpo-phalangeal joint, the wound becoming infected on account of the sloughing condition of the growth. The healing process was slow, and before this was complete a recurrence had formed at the upper angle of wound, and an amputation above the wrist was suggested, but declined. Subsequent to this several of the other warts became sarcomatous and when last heard from the patient was being treated by an old woman who posed as a "cancer doctor."

Case No. 2.—The second case, one of melanotic sarcoma arising from a pigmented wart, is as follows:

The history was kindly given me by Dr.

Z. M. Caveness of Wakefield, N. C., who in association with Dr. G. M. Bell, treated this patient.

Mr. S. P. G., age 65, farmer, personal and family history negative. The patient had a congenital pigmented mole, on his back, between the shoulders and near the vertebral column which gave him no trouble until 1902. During this year the growth became inflamed probably from being constantly rubbed by clothing, increased slowly in size and was removed in September, 1902, at which time it was about the size of a small marble. The wound made by the removal of the growth was slow in healing. After this the patient was relieved of all symptoms until the latter part of the spring of 1903, at which time he detected a small freely moving tumor in each axilla. These bodies slowly increased in size until the latter part of the summer when the enlargement in the left axilla began to grow very rapidly, causing much pain. It soon became adherent to and incorporated in its substance the axillary vessels and therefore its removal was not attempted. About this time the enlargement in the right axilla began to increase very rapidly in size and, in order that he might retain the use of his right arm, the mass was removed on November 5th. The wound healed nicely and patient expressed himself as feeling better. The mass in left axilla continued to enlarge and caused much pain, necessitating the administration of morphine. There were no symptoms of especial interest until November 25th when the patient had a very profuse intestinal hemorrhage. This was checked by appropriate treatment, but was followed by a severe diarrhea which continued until the time of the patient's death on November 29, 1903.

A microscopic examination of the removed lymphatic gland showed it to be a small round-celled melanotic sarcoma.

The following two cases were reported by Dr. R. H. Whitehead in a "Contribution to the study of Malignant Tumors arising in Congenital Moles," and by his courtesy I include them in this paper.

Case No. 1—"The subject of this tumor was a white man aged 47 years. He had noticed as long as he could remember a 'black mole' on the front of his right forearm a little above the wrist. For the last few weeks this had been enlarging rapidly, so that when I saw him there was in the situation mentioned, a perfectly black tumor, conical in shape, and about 2 C. M. high. The color was due largely to clotted blood, with which the tumor was encrusted, owing to frequent hemorrhages. The growth was removed by incisions carried widely into apparently healthy tissues. Eight months afterwards I learned that he had died with tumors all over him. They were estimated as at least 200 in number, were situated in and beneath the skin and varied in size from

that of a pea to that of a hen's egg. Towards the end of his life he suffered much from frequent painful micturition, and on several occasions passed in his urine fleshy masses believed by his medical attendant to be pieces of tumor."

Case No. 2—"This tumor was obtained through the kindness of Dr. C. S. Mangum, from a white woman 50 years old. She consulted Dr. Mangum concerning a larger mole situated over the inferior angle of the left scapula. It had been present all her life but only recently had been enlarging. Dr. Mangum thought best to remove the mole, especially as there were evidences of beginning ulceration. The subsequent history unfortunately, could not be obtained. It was learned, however, that the wound made by the operation never healed, and that the lymph nodes in the left axilla soon became enlarged. About eighteen months after the operation she was considered by her family physician to be dying of a malignant tumor of the uterus."

In considering the other degenerations of the papillomata only a few words will be necessary.

Carcinomatous changes some time take place in these growths, and this degeneration is most commonly seen in the papillomata of the face and occurs especially in very old people. Here the epithelial covering of the papillae instead of remaining upon the surface of the tumor dips downward in long tongue-like processes, invading the subcutaneous and deeper tissues and we have formed an epithelioma. The villous tumors of the bladder which are soft papillomata have a tendency, especially when of long duration, to take on carcinomatous changes. In a case of Dr. R. H. Whitehead's which was operated upon by Dr. H. A. Royster for tumor of the bladder, the growth proved to be a papillomata with probable beginning carcinomatous changes.

THE MODERN VIEWS OF ECZEMA.

By Louis Edelson, M. D., Louisville, Ky.

Of all skin diseases no one provokes so much discussion and difference of opinion as eczema. There are many theories as to its origin, several of them absolutely contradictory in the classification of its varieties and the treatment authors differ as widely. A very great dermatologist, Dr. Norman Walker, of Edinburgh, defines the disease in the following sarcastic manner: "Eczema is the term commonly applied to any wet or scaly inflammation of the skin, of the cause or nature of which the observer is ignorant." He in no wise, however, exempts himself from the same rule, and thinks that the affections which we call by this name are really several diseases which we have not yet learned to differentiate.

There are many cases of inflammation of the skin commonly called by this name which are plainly caused by external irritants. For the sake of avoiding the term eczema these cases may be called traumatic dermatitis. Then there are those which are known to be produced by parasites, such as the various ringworms. In most instances these are called by their proper name, but there is a form in which the groins, perineum and the insides of the thighs are involved which still often goes by the name of eczema marginatum. The great authority Unna, made a long study of seborrhea, the disease which produces dandruff of the scalp and sometimes spreads to other parts of the body; this is at present almost always classed as eczema, and it will require many years before the profession in general will be able to identify it with any degree of certainty.

The theory that the nervous system is responsible for this disease is borne out by several facts; it some times appears at the same time on opposite and corresponding parts of the body; this is not counting the hands and wrists which may be affected by the patient's occupation. The edema which is a prominent symptom in some cases is certainly caused by a relaxation of the vasomotor nerves which control the size of the blood vessels of the region. It often occurs in women at the time of the menopause, and has frequently been known to follow some great emotional disturbance, as fright or financial troubles. How far these are direct causes or merely predisposing ones is hard to say.

Disturbances of digestion are very often followed by outbreaks of eczema; some physicians attribute all attacks to this cause, and in every case put the patient on a strict diet. In some cases this succeeds, but in the majority it does not. Of course, indigestion and dyspepsia should be treated, and such a state may indefinitely delay the healing of any case, but it can not be regarded as the prime cause in many of them. In children the irritation of dentition will sometimes cause the disease, and these cases will rarely heal completely until the process is completed. Disturbance of the function of the liver, kidneys or the ovaries are responsible for not a few cases, and diabetes is accompanied by a very intractable form of the malady.

Next we come to the action of the microbes in the skin. No one denies that their action has a very important bearing upon the progress of the case. Many authorities consider them to be the main factor in all cases. It is doubtless true that in some forms of the disease microbes are solely to blame. In other types as soon as the least exudation begins the microbes commence to multiply, for this fluid is an ideal food for them. Their life processes generate poisons,

and these in turn irritate the skin and cause an increase of the exudation. As in any other form of inflammation innumerable leucocytes from the blood migrate to the part and combat the microbes. When the leucocytes are in sufficient numbers and possesses enough vitality they are able to kill the invading germs, and the disease comes to an end. Much has been written of late about the opsonins in the blood; these are substances which are supposed to render the microbes more appetizing and digestible to the leucocytes. When we are able to increase readily these opsonins to a sufficient extent, and to obtain the right one to correspond to each kind of microbe present there will not be so much need for local treatment. We have always possessed means of accomplishing this to a limited extent, iron and other tonics, digestants to increase the general nutrition, fresh air and sunlight, all aid in this way.

The great drawback is that these ends can not be reached in a few days, and the patient demands that we relieve him of his sufferings. We must, therefore, use measures which accomplish results more promptly. The local application of antiseptic substances will kill the microbes much more quickly and surely. There are some preparations which will, at the same time, relieve the itching and pain by their inherent analgesic properties. The best of these which I have ever encountered is a preparation called ecthol. It is a mixture of oleoresins and balsams which fulfills every qualification demanded of a remedy for this purpose. It is a sure germicide, yet mild in its action and even large quantities of it produce no poisonous effects. The case cited below is a typical example of its action:

Mr. Allan M., age 27, tailor. This gentleman had an eruption on the flexor surfaces of the arms and legs opposite the elbows and knees. At some seasons it would almost disappear, but would recur from time to time in a very acute form. This had persisted for twelve years, and he had tried many treatments, with but little relief. When he first came to me he was badly run down in general health, being weak and enemic. In the beginning I tried only systemic treatment, giving a tonic containing iron, quinine and strychnine; this improved his health to a marked degree, but the eruption remained the same. We then tried ecthol, applying it night and morning, and giving small doses internally, for it is a good general alterative. The pain and itching were eased during the first day, and at the end of two weeks the condition had entirely cleared up. For some time after this he applied a little of the remedy as a preventive of recurrence, then it was stopped altogether. He was kept under observation for several months, but there was not the least sign of any return of the symptoms.

ABSTRACTS AND SELECTIONS.

THE CHEMICAL ANALYSIS AND PHYSIOLOGIC EXPERIMENTS ON "MEATOX," THE NEW FOOD PRODUCT.

I. V. S. Stanislaus, B. Sc., Pharm. D., in the Medico-Chirurgical College of Philadelphia, in a letter to the editor of The Medical Bulletin, writes:

Enclosed please find the report of the chemical analysis made by me and of physiologic experiments conducted by me upon "Meatox," a food product recently introduced by Mr. Charles Marchand, the well-known New York chemist.

"Meatox," as will be seen from below given findings, is in a class by itself. It can hardly be called a "meat extract" in the ordinary sense of the word, as it represents more food-value than any of these analysis of meatox.

Upon analysis of a sample of Meatox it was found to be composed of the following ingredients and proportions:

Moisture	4.80
Celery Flavoring (residue from alcohol extract)	2.21
Sodium Chlorid.....	4.56
Proteid Matter	73.54
Insoluble Matter.....	9.43
Total	94.54
Ash	4.96
	99.50
Loss	.50
	100.00

Submitting the inclosed analysis I take pleasure in stating that basing it on the protein content this is the most wonderful exponent of the modern nutrients extant. It is practically five times the meat value as a food, and as such will command the attention of every physiologist and hygienist interested in food products.

Physiological Experiments on Meatox.

Meatox is a pale yellow, granular powder, having the odor and taste of celery, with which it is flavored.

Its composition, according to my analysis of March 28, 1907, is as follows: 73.54 per cent. of proteids, 4.5 per cent. of salts, and 12 per cent. of fats.

It does not dissolve in cold water, but imparts to the water an opaque color. When applied in a solution to the frog's heart it increases the rapidity of the beat for a short time, then makes the beat stronger.

The effect on blood pressure in the human subject was noted. A man was fed on Meatox, bread and butter, water, a little hot

tea, without milk, and fruits and berries with a little sugar for ten days. Blood-pressure was estimated with a Rivi-Rocci sphygmomanometer, the systolic pressure being only recorded. Before starting in on the Meatox diet, the radial systolic pressure was 115 millimeters of mercury, while at the close of the diet the radial systolic pressure was 118 millimeters of mercury.

The blood pressure on a rabbit was taken and confirmed the rise of pressure. The rabbit was carefully etherized and a cannula placed in the left carotid artery, which was attached to a Ludwig's mercury manometer, and records of the various changes in the pressure were noted on a smoked drum of a Ludwig's kymograph.

The effect of Meatox was tried on intestinal peristalsis. The effect was studied after the method of Professor Magnus, of Heidelberg. A piece of the small intestines of about 10 centimeters in length was taken from a rabbit. This was placed vertically in a glass containing about 225 cubic centimeters of a modified Ringer fluid kept to the temperature of 37.5 degrees C. One end of the intestine was attached to an L-shaped glass rod by means of an S-shaped pin hook, and the other end to a Porter's heart lever slightly weighted.

Oxygen was allowed to pass through the solution all the time. Before the Meatox was added contractions were recorded, to get about as near normal contractions as possible. About 2 decigrams of Meatox were then added, and it was noted that the tonus of the contractions increased but the frequency remained about the same. When larger doses of Meatox were added to the intestine the frequency became a little slower, but the tonus and force of contractions increased quite markedly.

The effect on voluntary muscles was studied by soaking the gastrocnemius muscle of a frog in a watery solution of Meatox. The muscles were allowed to soak in this for various lengths of time, ten or fifteen minutes being the usual periods.

The recording of the effect of a maximal break electric shock was noted on a smoked drum by means of a Porter's muscle lever and moist chamber. The muscles contracted very rapidly. Both the systole and diastole were very rapid, and when a strong tetanizing current was added it was noticed that the contractions became stronger after the current was on for a few seconds. Return to the normal was gradual. From this it appears to assist in muscular contraction.

The above deductions convince that Meatox as a concentrated food is an easily digested, assimilated, and sustaining condiment. It is the first in the field of foods as a true, highly-organized proteid food. Acknowledgment is here made of the valuable assistance rendered by Joseph F. Ulman, M. D.

THE NEW ALBANY MEDICAL HERALD.

DECEMBER, 1907.

Old Series Vol. XXV, No. 324. New Series Vol. XIV, No. 186

GEO. HANLON DAY, M. D., Editor.

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EDITORIAL.

REVACCINATION STATISTICS.

It is a well-known fact that the protection conferred by vaccination against smallpox becomes impaired in the course of time and may, indeed, be lost entirely. The protection, however, may be restored by a second vaccination, and in the majority of individuals such revaccination will protect against smallpox for life.

It is, of course, understood that a person upon whom an unsuccessful revaccination has been performed is not vaccinated. Revaccination means a second attack of vaccinia and not merely the rubbing of virus into the skin. The failure of a secondary vaccination does not necessarily indicate an immunity against vaccinia and variola, but may be due to faulty virus or technique; or the subject may be for a time immune and later redevelop a susceptibility to both infections.

Value of Revaccination as Illustrated in

the Comparative Smallpox Losses of the French and German Armies in 1870.—The entire German field army, which numbered over a million soldiers, although exposed to a raging smallpox epidemic in France, lost by death from this disease 297 men; the French army, on the other hand, suffered the enormous loss of 23,469 men from smallpox. (It will presently be shown that the German troops were well vaccinated and the French soldiers poorly vaccinated.)

The Illinois State Board of Health Bulletin says: The mortality rate from smallpox of the German soldiers in the field was 5.97 per cent. Of the stationary or immobile German troops 3,472 were attacked, of whom 162 died, giving a mortality rate of 4.6 per cent. The aggregate number of German soldiers attacked, including those in the field and the stationary troops, was 8,463, of whom 459, or 5.42 per cent., died.

The number of cases in the French army is not known, but the death rate was forty-nine times greater than in the German army.

Moreover, the death rate of smallpox in the German army compares very favorably with the death rate of the civil population of Germany. In the entire army, stationary and in the field, there were 459 deaths from smallpox; in the Prussian kingdom in 1871 there were 59,839 deaths from the same disease. Still more striking is the comparison of the death rate between the army and the inhabitants of Berlin. In this city of 826,341 population, a much smaller number than that comprising the army, the deaths from smallpox were 5,508.

It is known that the Prussian army was well vaccinated up to the time of the war, when the vaccine supply became insufficient. Nearly all the soldiers of the German army had been vaccinated in childhood and again upon entrance into the army, for that custom had been enforced for a number of years.

The French army, on the other hand, was poorly vaccinated. From 1832 to 1859, smallpox caused 39 per cent. of all deaths in the French army. In 1857 an order was issued that all recruits be vaccinated without regard to the presence of previous scars, and the smallpox deaths during 1862-72 fell to 19 per cent., exclusive of the year of the war. It is evident, however, that vaccination was only partially practiced, for official record shows that in 1866, of 45,064 recruits but 33,513 were vaccinated; in 1868, of 82,203 recruits only 47,324 were vaccinated, and in 1869, of 115,876 recruits only 54,720 were vaccinated; in other words, in 1869, 61,156, or over half the recruits, were not vaccinated on entrance into the army. Furthermore, a large proportion of the vaccinations performed were without result; of first vaccinations 51 to 63 per cent. failed, and on repetition 66 per cent. failed.

That locality did not cause the discrepancy in the death rate of the French and German

soldiers is shown by the fact that the smallpox mortality among the French prisoners on German soil was 1,963, while the entire German army on German soil lost but 162 men.

The remarkable results of vaccination and revaccination in the German army, particularly when compared with those in the French army and with the civil population of Germany, led to the adoption by the German government of a law making vaccination and revaccination compulsory. This was passed April 8, 1874, and went into effect on April 1, 1875.

Its essential provisions are as follows: Every child must be vaccinated before the expiration of the first year of its life, unless it has had smallpox or unless some physical disability exists; in the latter event the vaccination is undertaken within one year of the removal of the existing disability. Every pupil of a public or private educational institution must be vaccinated between the age of thirteen and fourteen years, unless there is a medical proof that he has had an attack of smallpox within five years or has been successfully vaccinated within that time.

Parents, caretakers, guardians, or heads of schools who fail to comply with the law are subject to fine or imprisonment. Vaccination must be performed only by physicians, and any one vaccinating illegally is punished by a fine not exceeding 150 marks or imprisonment not exceeding fourteen days.

The Result of the German Compulsory Vaccination Law.—If there was in existence no other statistical evidence of the efficacy of vaccination and revaccination, the history of smallpox in Germany since 1875 would be sufficient testimony.

During the disastrous pandemic of 1871-72 the rate was 243.2 and 262.67, respectively. After the law of 1875 went into effect the annual mortality in Prussia fell so that between 39.28 (1876) and 94.72 in 1882. Fatality per 100,000 of population was 1.91, the maximum reaching 3.6 (in 1877).

On the other hand, in Austria, where the lax vaccination and revaccination requirements remained unchanged, the mortality rate from smallpox during about the same period (1875 to 1884) increased, varying between 39.28 (1875) and 94.79 in 1882.

Since the law of 1875 went into effect in Germany, there have been no epidemics of smallpox in that country. The smallpox is frequently introduced by foreigners, particularly on the frontiers, but the disease can find no foothold. In 1899 there occurred in the German Empire, among 54,000,000 people, 28 deaths from smallpox; these occurred in twenty-one different districts, the largest number in any one district being 3. Not a case occurred in a large town.

Kubler in speaking of the importation of

smallpox into Germany, says: "Among the fatal cases there were many who had come from foreign countries; in the interior of the Empire aliens, chiefly Russian-Polish laborers, constituted a large percentage of those who contracted the disease. The annual recurrence of the pestilence among these people has recently necessitated a regulation that workmen before being admitted to employment within the realms must produce proof of successful vaccination or recovery from an attack of smallpox, and in case they were unable to do so they must submit to vaccination.

The following figures indicate the prevalence of smallpox on the German frontier as compared with the interior.

The mortality from smallpox in Germany from 1886 to 1889 was

	At the Frontier. In the Interior.	
1886	110 cases.	45 cases.
1887	119 "	49 "
1888	94 "	16 "
1889	188 "	12 "

In 1897 there were but five deaths from smallpox in the entire German Empire (54,000,000 population).

Furthermore, for a period of thirteen years in a population comprising two-fifths of the total inhabitants of Germany, there were only five instances of death from smallpox in successfully revaccinated persons.

Germany has taught the world how to utilize Jenner's great discovery so as to exterminate smallpox.

The German Vaccination Commission of 1884, referring to the influence of the compulsory vaccination law, says:

"Previously to 1871 smallpox mortality in Austria behaved much like that of Prussia, though higher on the whole. The great epidemic of 1872-1874 was more fatal and lasted longer than in Prussia. During the next two years the mortality fell, as usual after epidemics. Here the influence of the epidemic in lowering the mortality ceases, and the latter rises at once to its old figures, viz., as before the epidemic, and even higher, and this rises at once to its old figures, viz., as before the epidemic, and even higher, and this rise was not merely temporary.

"The remarkable and persistent decline in Prussia since 1875 can only be due to the vaccination law of 1874, because all other conditions remain the same in the two countries. The only difference is that in Prussia the revaccination of all school-children at the age of twelve years was made compulsory in 1874."

The Board of Health of Berlin has prepared tables comparing the number of deaths occurring between the years 1886 and 1889 in countries having compulsory vaccination, and those without such provision:

	Population	Smallpox deaths				Average of deaths	Average per million of population
		1886	1887	1888	1889		
Compulsory vaccination	(Sweden, 4,746,465.....)	1	5	9	2	4	1
	(Ireland, 4,808,728.....)	2	14	3	0	5	1
	(Scotland, 4,013,029.....)	24	17	0	6	12	3
	(Germany, 47,923,735.....)	197	168	112	200	169	3.5
	(England, 28,247,151.....)	275	505	1,026	23	458	16
	(Switzerland, 2,922,430.....)	182	14	17	3	54	18.5
	(Belgium, 5,940,365.....)	1,213	610	865	1,212	975	164
	(Russia, 92,822,470.....)	16,938	25,884	1....	1....	21,411	231
	(Austria, 23,000,000.....)	8,794	9,591	14,138	12,358	11,220	510
	(Italy, 29,717,982.....)	1....	16,249	18,110	13,416	15,925	536
	(Spain, 11,864,000.....)	1....	1....	14,378	8,472	11,425	936

But a glance is necessary to show the striking difference between the number of deaths in those countries having compulsory vaccination and those in which there is no such measure. The average deaths per million in the compulsory vaccination countries is eighty times less than in the others. Furthermore, England is the least vaccinated of the compulsory countries and her death rate is the highest among these.

Immunity of Physicians and Nurses in Smallpox Hospitals.—If it can be demonstrated that physicians and nurses in smallpox hospitals are protected by vaccination, this must be regarded as a crucial test. For if these persons, living in the same atmosphere with scores or hundreds of smallpox patients, breathing in their exhalations, are enabled to escape the infection, it certainly should be possible for others much less exposed to acquire similar immunity.

In the Municipal Hospital of Philadelphia during a period of thirty-four years, in which time over 9,000 cases of smallpox have been treated, we have not had a physician, nurse or attendant who had been successfully vaccinated or revaccinated prior to going on duty, contract the disease.

Indeed, during all these years and among hundreds of persons in attendance on the sick, only two or three fell ill with mild attacks of varioloid, and these would have been avoided had not the exigencies of the occasion demanded that the attendants be immediately assigned to duty, without waiting for the vaccination to work out its immunity.

Physicians, nurses and others have no such immunity against other infectious diseases as against smallpox. According to Ernest Hart, in 1893, of 2,484 persons employed in the nine Metropolitan Fever Hospitals of London, 130 became infected and 2 died; 4 assistant medical officers, 10 nurses, 43 assistant nurses and 16 maid-servants were attacked with scarlet fever. Two assistant medical officers, 6 nurses and 15 assistant nurses contracted diphtheria.

The deaths from smallpox of medical men (who are particularly well vaccinated) are but 13 per million as against 73 per million

of the general population in England. In scarlet fever, on the other hand, against which physicians have no special protection, the figures are reversed; 59 medical men per million die of scarlet fever as against 16 per million of the general population.

Experience of the Municipal Hospital of Philadelphia during the Epidemic of 1901-1904.—During this period over 3,500 cases of smallpox were received at the hospital. No person who had been recently successfully vaccinated was admitted to the hospital with smallpox. Since the outbreak of the disease in the city, it has been estimated that about 500,000 persons were vaccinated—about a third of the population. If vaccination confers no protection against smallpox, it is reasonable to suppose that some of these persons would have contracted the disease and been brought to the hospital. (About 80 per cent. of all the cases in the city were sent to the hospital.) But no such patient could be found among over 3,500 admissions.

In order to provide accommodations for the unusually large number of cases of smallpox, which was rapidly increasing, it was necessary to erect additional buildings as well as enlarge those already in use. On this work from 50 to 60 men were employed, and as they were required to come constantly into close proximity to the patients they were requested to come to the administration building and get vaccinated. This request was complied with by all except two, and these two took smallpox. We would emphasize the fact that they were the only ones that were stricken by the disease. One we understand was a Christian Scientist, and he trusted to this delusion for his protection. Poor fellow! It did not even save his life, as he fell a ready victim to a disease that respects nothing but vaccination.

Ravages of Smallpox in Countries where Vaccination is Neglected.—In most of the European countries and in the United States smallpox at the present day is a comparatively rare disease, appearing, as it does, in epidemics at infrequent intervals. Many physicians who have been in practice for fifteen or more years have never encountered

even a single case of this disease. In well-vaccinated countries the epidemics are small and of short duration. In countries, however, in which vaccination is neglected, the epidemics may attain in extent and mortality the terrible numbers that were reached in the days before vaccination. In the Russian Empire, including Asiatic Russia, there were 275,502 deaths from smallpox in the five years from 1883 to 1893. In Spain, with a population of only ten and half million people, there were 23,881 deaths from smallpox during this period. Hungary had 12,241 deaths, and Italy and Austria each over 11,000 deaths. In Germany, where there is compulsory vaccination and revaccination the smallpox deaths, during the same five years numbered only 287.

Dr. Jeanselme is authority for the statement that smallpox is still a murderous disease in Indo-China and other parts of the East. He estimates that a quarter of the infantile population succumbs to this disease. During times of epidemic recrudescence the death rate is higher still. In 1900 Dr. Jeanselme saw the population of the village of Loos almost completely swept away by smallpox, a few old people, protected by a previous attack, being the only survivors. Children under the age of five years furnish the greatest number of victims. The Annamites and Cambodians regard variola as a necessary evil.

INFANTILE SCURVY.

Infantile scurvy is a disease of modern times and is attributable to altered conditions arising from over-civilization and from the crowding into cities, which makes it difficult or impossible for children to be fed in an ideal manner. There has been a steady diminution, during the last half century, in the number of children who are fed in the natural mammalian fashion—at the mother's breast. It is less than thirty years since the nature of the disease was recognized by Cheadle, his first paper appearing in 1878. His article, in which he insisted on the identity of infantile and adult scurvy, was published in 1882, but his views were somewhat slow in gaining general acceptance, and the truth of his contention was not thoroughly established until a paper was read by Sir Thomas Barlow on this subject before the Royal Medical Society in 1883.

"Scurvy is a constitutional disease due to some prolonged error in diet." Among its symptoms are spongy, bleeding gums, swelling and ecchymoses about the joints, especially the knee and ankle, hemorrhage from the nose and occasionally from other mucous membranes, hematuria, extreme hyperesthesia and often pseudoparalysis of the lower extremities. These local symptoms are usually accompanied with anemia.

Scurvy and rickets are frequently associated, but are not necessarily connected and are not different forms of the same disease. A large majority of the cases occur between the sixth and fifteenth months and half of them between the seventh and tenth months. The greater number are seen in private practice, often in the midst of the best surroundings. The only important etiological factor yet known to bear any relation to scurvy is the diet. The most marked effects of scurvy are seen in the bones, blood vessels and the blood. The most marked lesion is sub-periosteal hemorrhage and occur almost anywhere in the body, but chiefly affects the bones of the lower extremities and may reach from the knee to the great trochanter, or from the ankle nearly to the knee. Effusions may also be found between the muscles and blood may infiltrate the cellular tissue in the neighborhood of the joints. The bones themselves may also be affected. Separation of the epiphyses of some of the long bones, generally at the lower end of the femur or lower end of the tibia, is found in most of the fatal cases.

Hr. C. W. M. Brown, in the Buffalo Medical Journal, says that in cases, which have been carefully observed, there may be noticed before the evidence of scurvy appears a pallor, general indisposition and fretfulness, with falling nutrition, but usually tenderness of the bones is the first symptom noticed. At first it may be only slight and indefinite in character, so as to cause the infant to cry upon handling. Later, it becomes constant and more acute. Swelling may appear about the ankles and knees. There may be some changes in the gums, which are more apt to appear if the child has teeth. They are of a purplish color, swollen, bleed upon the slightest rubbing, sometimes spontaneously. Ulcerations are more apt to appear about the upper teeth. The child is cross, sleeps badly, loses color, weight, and appetite. Symptoms usually come on gradually and may continue for some weeks without any very marked impression upon the child's general condition. Not infrequently, however, symptoms appear rather suddenly, when they are usually ascribed to an injury, real or supposed. If the symptoms are not recognized, the pain and tenderness of the bones increase so that the child will lie motionless and no voluntary movement can be excited. Pain and tenderness are present in 95 per cent. of the cases. Paralysis is often suspected. Ecchymoses are frequently seen, especially about the large joints and often confirm the opinion previously formed, that the child has met with some accident. Bleeding may occur from the mouth, pharynx, or bowels. Blood may be vomited or passed in the urine.

The urine was very carefully observed in

35 of Morse's cases. It was normal in 20 and abnormal in 15. In three of these, however, it was merely noted that it stained the diapers red or brown. Excepting pallor, it was the first symptom noted in eight of the proved cases of scurvy and was the only symptom in two. Unless recognized the symptoms increase in severity and conditions grow steadily worse until death occurs from general weakness, sudden heart failure, or from some complicating disease, such as broncho-pneumonia or acute gastro-enteritis. Separation of the epiphyses from the shaft of some of the long bones generally at the lower end of the femur or tibia is found in most fatal cases.

In 1898 the American Pediatric Society made a collection embracing 379 cases. Of these, twelve had breast milk, alone, in ten; five, raw cow's milk, without any other food in four; twenty, pasteurized milk—sixteen without any other food; sixty, condensed milk—thirty-two with no other food; one hundred and seven, sterilized milk—sixty-eight without any other food; and two hundred and fourteen had proprietary infant foods.

Cheadle gives details of the previous feeding in sixty cases of infantile scurvy observed by him; of these, forty-six were taking various patented foods, thirteen of these having a certain amount of milk said to be fresh, at the same time; and among the remainder three were taking peptonized and seven sterilized or humanized milk.

Morse, of Boston, in a recent article, reporting fifty cases, occurring in his own practice, says: "From the point of view of modern ideas of reasonable infant feeding food was irrational, in nineteen of the cases taking proprietary foods, in four of those taking milk mixtures and in the case of one on general diet, making a total of twenty-four. Milk was used in the preparation of the food in forty-one cases, while no milk was used in eight cases. In the forty-one cases in which milk was used in the preparation of the food, the mixture was boiled in twelve, pasteurized in nineteen and unheated in nine, while in one case there was no data as to whether or not heat was used. The food was also peptonized in four of the pasteurized and one of the unpasteurized mixtures. The mixture was too weak in five cases and the same mixture was continued for months in two cases. In only one case was a rational mixture being taken and that was prepared with barley water instead of water. The digestion was good in twenty-three and feeble in twenty-seven of these cases, apparently showing that the scurvy was not due to disturbance of digestion and that foods may cause scurvy without causing disturbance of digestion."

A short time ago there was an epidemic of infantile scurvy in Berlin, among children supplied with pasteurized milk from

an institution, but it was found to be confined to children whose parents, as an additional precaution, boiled it for some time after it was delivered to the house. Out of twenty-five severe cases seen by Colman in hospitals and private practice, nineteen were taking some kind of dried infant food as staple diet, seven having a certain amount of fresh milk as well, the remaining six were taking sterilized milk or humanized milk, or milk sterilized by long heating.

The disease with which infantile scurvy is most frequently confounded, is rheumatism. Holt says that fully four-fifths of the cases which have come to his notice, have had that diagnosis made. The extreme rarity of rheumatism under one year should always make one cautious, and pain and tenderness in the legs only should in an infant invariably suggest scurvy rather than rheumatism. He says that many cases of scurvy come into the hands of the orthopedic surgeon. He has known a diagnosis of malignant disease to be made from the cachexia or discoloration and the pain. He has known two cases to be operated on by eminent surgeons, one with the diagnosis of sarcoma, and one of osteitis of both tibia.

The cases probably which are most easily missed are the slight cases where there is only hematuria or epistaxis present. Of the fifty cases reported by Morse, a correct diagnosis had been made in but five. The diagnosis in the other cases were acute nephritis, 1; excess of uric acid with consequent staining, 2; arsenical poisoning with inflammation of the kidneys, 1; rickets, 2; spinal or Pott's disease, 6; hip disease, 1; periostitis, 1; rheumatism, 6; gout, 1; syphilis of cord, 1; difficult dentition, 5—in four of which the gums had been lanced; strain, 1; injury, 1; tuberculosis, 1; gumma of eye, 1. In two other cases the physicians stated they had no idea what was the trouble, while Morse himself states that he has mistaken congenital syphilis and hematuria from lead poisoning for scurvy.

Recently, Snow, of Buffalo, reported a very interesting case of hemorrhage into the orbit, with otherwise typical symptoms of scurvy, which had been seen by eight ophthalmologists without a correct diagnosis having been made. Yet the diagnosis of scurvy seldom presents any difficulty to one having once seen a case. If the essential features of the disease are kept in mind—the soreness of the limbs, spongy, swollen gums, swelling near the large joints, a tendency to hemorrhage and a history of the prolonged use of some proprietary infant food, or sterilized, pasteurized or condensed milk. Scurvy is frequently associated with rickets. Of 340 cases reported in the American Pediatric Society investigations, in which this point was noted, symptoms of rickets are present in 152 or 45 per cent., while in 55 per cent. rickets were absent.

It is stated that in fifty of these cases the rickets antedated from the development of the scurvy. There were signs of rickets in forty-one cases out of fifty observed by Morse. The association of the two diseases is so frequent that by many of the English writers they are still spoken as one disease—scurvy-rickets.

The prognosis is always good if the disease is recognized early. No patients with symptoms so serious improve with such marvellous rapidity as those with scurvy under prompt management. It is only when the disease is of long standing and the malnutrition is severe, or when serious complications involve the digestive tract, that the issue becomes doubtful. Any case allowed to go on may result fatally. It is rare that scurvy leaves any permanent effect. Recovery is not only rapid but complete and relapses are extremely rare.

The treatment is simple; stop all proprietary foods, condensed milk, sterilized milk, and substitute a diet of fresh cow's milk adapted to suit the child's digestion. With this treatment, improvement will soon begin and recovery will follow. However, the addition of fresh fruit juice, preferably orange juice, is of the greatest value and when given improvement is much more rapid. From half an ounce to four ounces may be given during the twenty-four hours. Other things of value are fresh beef juice, and for older children fresh vegetables and potatoes. The general condition, anemia, and malnutrition, should receive the proper attention. The fact remains then that when a child is artificially fed this can nearly always be satisfactorily obviated by supplying the child with milk as little altered as possible after it is drawn from the breast of the animal supplying it.

The diet statistics quoted show that while scurvy may develop occasionally upon almost any sort of food, several stand out more prominently—namely, pasteurized, sterilized, and condensed milks and proprietary infant foods. Analysis of these tables seem to show that the absence of freshness and the heating of the food are very important elements in the production of scurvy. The farther food is removed in character from the natural food of a child, the more likely is its use to be followed by the development of scurvy. Long continued use of the same percentages, at one time proper, has been followed by the appearance of scurvy. Formulas should be changed from time to time as needed, and if patent foods and heated or condensed milks are used, their effects should be carefully watched, and they should not be continued as the sole diet for long periods. When scurvy and other diseases of nutrition have been proven to depend so completely upon diet, especially upon the use of patented foods, pasteurized, sterilized, or condensed milk, is it stating

the fact too strongly to say that the use of these foods is radically wrong, may we not say it is almost criminal, for continuous infant feeding, when fresh, clean, cow's milk can be obtained?

In 1900, I reported to the Academy a fatal case of scurvy seen in consultation. The child was eleven months old and had the following history: Was well since birth until about nine months of age, when a week or two after a supposed contusion the thigh began to swell and when seen was several times larger than the other. The skin was red, somewhat hotter than normal, and apparently fluctuated under palpation. The child was anemic, much emaciated and for several days had had enterocolitis. The gums were generally swollen and purple, especially upon the upper jaw. The child had ten teeth. The food from birth until a few days before I saw it had been sterilized milk and Mellin's Food. The attending physician had made a diagnosis of ostitis or periostitis with a large collection of pus. In this view I concided. The next day the femur was opened under anesthesia and the periosteum was found separated from the whole length of the shaft, the shaft itself being separated from the epiphysis. The separation of the periosteum from the shaft was made by effused blood, which was also found extravasated between the muscles. The child was very weak and died two days later from exhaustion.

Abstracts and Selections—Continued.

THE SOUTH A HAVEN FOR THE NERVOUS.

The South is an ideal winter resort, and extends a hearty welcome to all sojourners seeking a place of enjoyment. The tourist chooses a place of alluring beauty, and finds his range of choice extensive, for in the number of miles covered by Southern roads and practically all the important points reached by the Southern Railway only, he may imitate the luxury of a nabob at some of the palatial hotels of the South or enjoy the less expensive hostelries, as taste dictates.

Florida, the land of sunshine and flowers, is a haven for pleasure and health seekers, but does not necessarily imply an expensive one, as accommodations and prices are within reach of all. Taking into consideration the magnificence of the hotels and elegant service rendered, the rates are not extravagant. These grand hostelries and the exquisite luxuries afforded make them second to none on the globe. Coming north from this ideal paradise, one may choose a sunny spot in any of her sister States and enjoy the equable climate accorded to each of them.

The Southern Railway has made it possi-

ble for one to revel in the luxurious "palaces on wheels" which speed as the wind through a region of beauty. The many historic points along the route have made it doubly interesting. Seven elegant trains during the winter are operated daily by the Southern Railway between New York and the South, including the "Southern's Palm Limited," one of the most elegantly equipped trains in the world, and the "Washington and Southwestern Limited," equally as handsome.

In the far-famed "Land of the Sky" one finds a climate all its own, suitable for athlete, sportsman, invalid or pleasure seeker. It is especially recommended for any throat or pulmonary trouble on account of its altitude. The southern latitude tempers its winters and robs its summers of extreme heat, thus producing an invigorating atmosphere, which lures the tourist to outdoor exercise and fascinates him with the beauties of Nature at the same time rejuvenating his whole physical condition. "The Land of the Sky" is that portion of Western North Carolina lying between the Blue Ridge Mountains and the Iron, Smoky and Unaka Ranges of Eastern Tennessee. It is a superb elevated plateau, the lowest point of which is more than 2,000 feet above the level of the sea.

Asheville, the central city of this favored region, is a place of considerable importance, has nearly twenty thousand inhabitants and presents an air of municipal prosperity much in advance of cities considerably larger in size. It possesses several large and fine modern hotels, an opera house, an auditorium for conventions, an art gallery, a public library and many handsome public buildings and institutions.

MEDICAL GLEANINGS.

A decoction or infusion of couch grass is an excellent remedy for cystitis and irritability of the bladder.

The majority of doctors who attend medical conventions want to have a good time; a few are anxious to read papers.

The eruption in syphilis is not necessarily symmetrical. It may affect but one side, but is inclined to be disseminate.

Venereal diseases should be treated at once and not permitted to recover spontaneously as they do so at great peril to other tissues in many cases.

Why One Doctor Succeeds.—There is a decision, a firmness, a kindness and an attentiveness, an interest that other men do not show in their work.

The use of cathartics is always dangerous in intestinal obstruction, as the increased peristalsis following their administration

may be responsible for perforation of the bowel.

According to Church a perfectly normal individual is a rarity. No two observers, perhaps, could agree upon the criteria which should mark a normal individual.

Oil of citronella added to a preparation containing ichthyol will entirely overcome the unpleasant odor of the latter. This is an item of considerable importance to those who place much confidence in ichthyol, but who often hesitate to employ it on account of the odor.

Severe Diarrhea in Typhoid Fever.—Osler employs a starch and opium enema; or bismuth in large doses and Dover's powder by the mouth; or a mixture of lead acetate, two grains, dilute acetic acid, fifteen to twenty minims, and morphine acetate, $\frac{1}{2}$ to $\frac{1}{4}$ grain.

Cases of ulcerative proctitis which often result in rectal stricture are particularly common in women and have been observed especially in prostitutes. In these cases gonorrhea or syphilis should always be looked for, although in some instances the ulcerative process follows an ordinary catarrhal proctitis or dysentery.

Some recent statistics regarding the death rate from tuberculosis give 2,488 as the rate for the Sioux Indians, and 71.8 per 100,000 among the Polish Jews. If this is true the latter are the most free from the disease of any known people. Figures for the Polish Jews in the United States will hardly come up to these which are doubtless compiled from statistics in Europe.

Sabouraud commends the use of an old-fashioned remedy, the lapis divinus, for treatment of sty. Lapis divinus is composed of equal parts of sulphate of copper, nitrate of potash and alum, with the addition of camphor in the proportion of one-fiftieth of the whole. These are fused together and run into sticks. For use with styes a lotion is made by dissolving 1 of lapis divinus in 200 of rosewater. The treatment consists of epilation of every lash showing a sty, or even a simple red point at its base. The patient is then told to bathe the lids 10, 20 or 30 times a day with the lotion. In a few days the eruption of styes will have ceased, but, should another appear, the affected lash must be epilated and the bathing of the lids persevered with religiously. The patient must be assured that the lashes will grow again, but it will be a month before this assurance will become a material fact.

Dr. E. J. Fisk, in a letter to the Anasarcin Chemical Co., writes as follows: I received sample box of your Anasarcin Tablets and used them in my own family in a case of valvular disease and renal stenosis. Such a pronounced localized edema of face on rising, and fingers, seldom in extremities or

abdomen. Had used the usual remedies with no noticeable effect. Began with Anasarcin Tablets one hour before meals and on retiring. The result was most satisfactory, for on second day face and hands were normal and a better general condition of health has followed the continued use.

Elderly woman, fifty-six, had edema of feet, and ascites; mitral regurgitation. She was quite portly and I had little time or opportunity to examine heart; however found her in the distress of an attack of mitral regurgitation, followed by great agitation. Began the use of tablets by crushing one and dissolving, giving solution of one every two hours. I was astonished at the rapid disappearance of the effusion, and the rapid betterment of my patients.

I have secured the tablets here in Troy, two boxes so far. I at first thought your literature rather strong, but now believe you are justified in all you claim.

The Cleveland Medical Journal quoting from the Denver Medical Times, concerning Codeine, states, that, according to Butler, "It is less depressing and more stimulating than morphine, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal and phthical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods, without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of Codeine on the alimentary canal are remarkable, in that it assuages pain as well or better than morphine, and, nevertheless, does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery." In view of these facts it would seem that Antikamnia and Codeine Tablets are a remedy which should find a wide field. Prof. Schwarze (Therapeutische Monatshefte) in writing upon the treatment of the different forms of dysmenorrhea, and the different forms of congenital deformity of the uterus, states that the coal-tar analgesics are of much use, as well as the preparations of iron and sodium salicylate. In many cases it is necessary to administer Codeine in small doses, and the tablets of "Antikamnia and Codeine" would seem to have been especially prepared in their proportions, for just these indications.

A Successful Treatment for All Narcotic Drug Addictions.—The habitual use of narcotic drugs has become so prevalent that every physician has this class of cases to contend with in his practice.

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Hyos-Sco-Phine Tablets contain hyoscynamine, scopolamine, piperidine, pilocarpine, caffeine and morphine in graded doses, quantitative formula appearing on every bottle. The combination is antidotal, eliminative and supportive. The treatment extends over such a period of time as to enable a very gradual withdrawal of the opiate, thereby avoiding the unpleasant experience of the patient under the hyoscine and other methods in use. To physicians sending information as to the kind and quantity of narcotic drug used by any patient the Combs Chemical Company, of St. Louis, will send price list for treatment adapted to the case, or will make quotation on any special treatment which may be desired.

CAUTION.

Whenever the true merit of a preparation is authoritatively established, imitation is sure to make its pernicious appearance. To counteract the injurious results of another of these fraudulent proceedings—in this instance affecting firm name and reputation—**SANDER & SONS** have been compelled to appeal to law, and in the action tried before the Supreme Court of Victoria, the testimony of a sworn witness revealed the fact that this witness suffered intense irritation from the application to an ulcer of the defendant's product, which was palmed off as "just as good as **SANDER'S EUCALYPTOL**." **SANDER & SONS** had the satisfaction to obtain a verdict with costs against this imitator, who is perpetually restrained from continuing his malpractice.

Dr. Owen, in a report to the Medical Society of Victoria, and Dr. I. Benjamin, in the Lancet, London, both denounced, as others did before, on the strength of negative results, the application of unspecified eucalyptus products.

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THE NEW ALBANY MEDICAL HERALD

✻ DECEMBER, 1907. ✻

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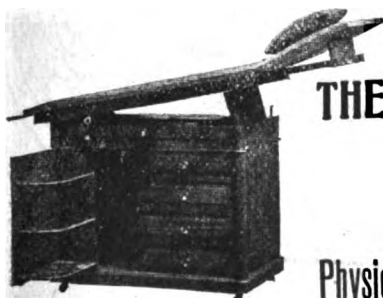
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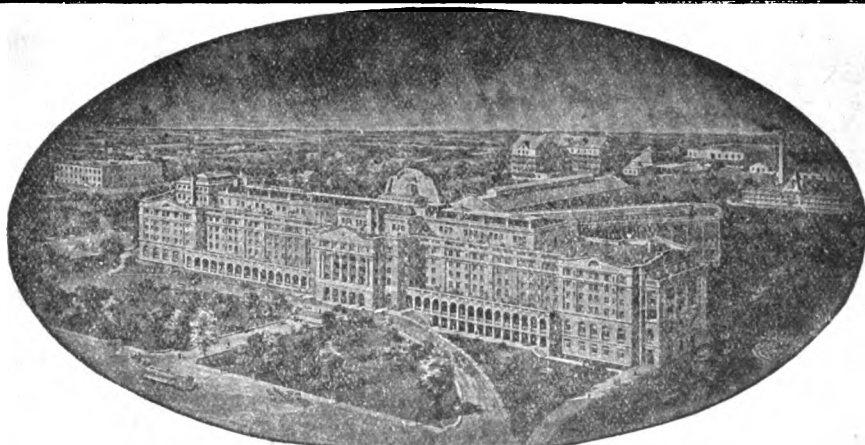
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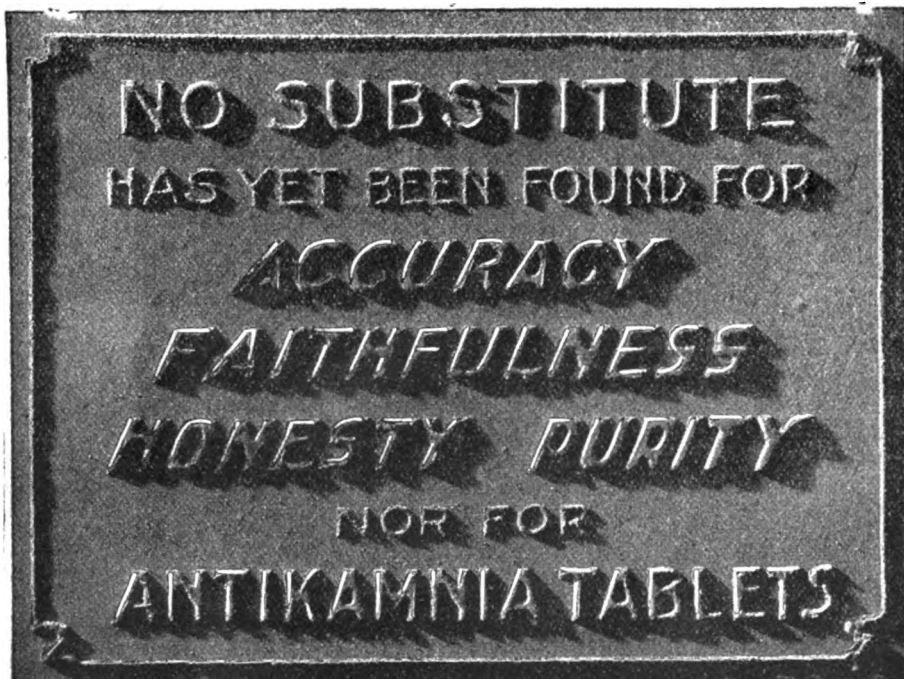
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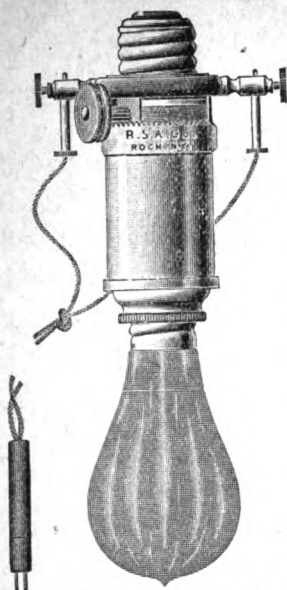
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WE HAVE ALWAYS Emphasized Our Use of Coca Leaves Selected for AROMATIC and MEDICINAL Qualities and as Even the Negligible Content of Alkaloid, Incidental to such Leaves, is not Essential to Our Formula, our Processing now Entirely eliminates every Trace of Cocaine from the Preparation.

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"Three teaspoonfuls of cod-liver oil will never be replaced by three teaspoonfuls of cream or other fat."—Dr. A. Jacobi, *Therapeutics of Infancy and Childhood*, 3d ed., p. 127.

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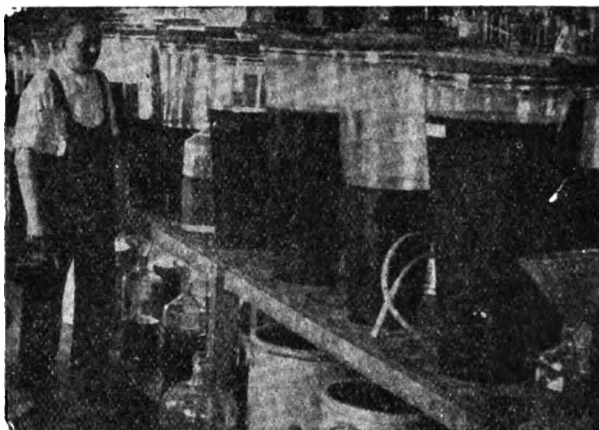
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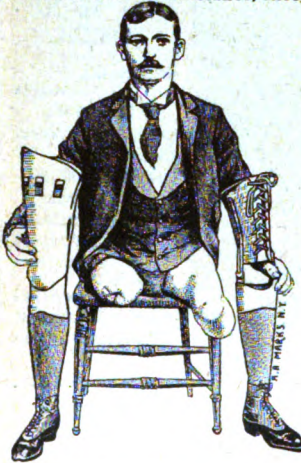
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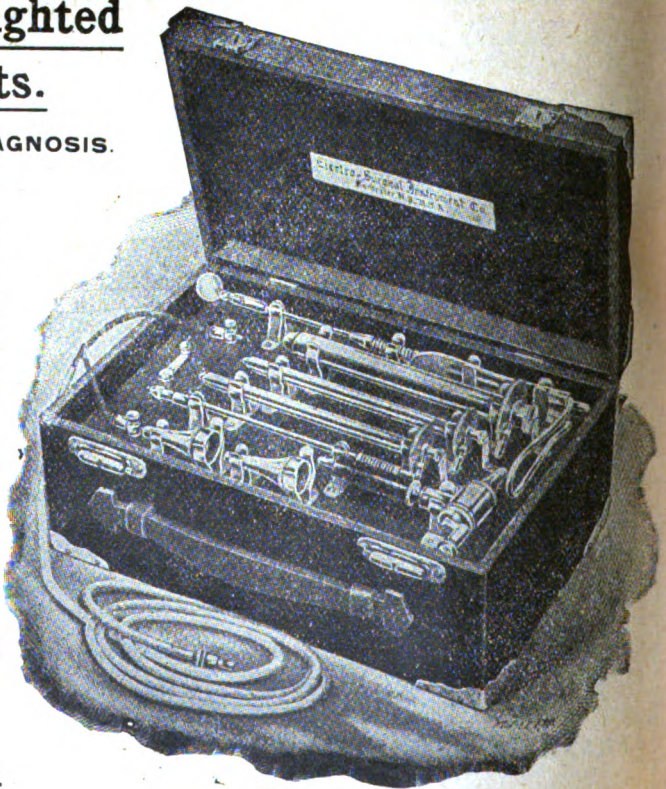
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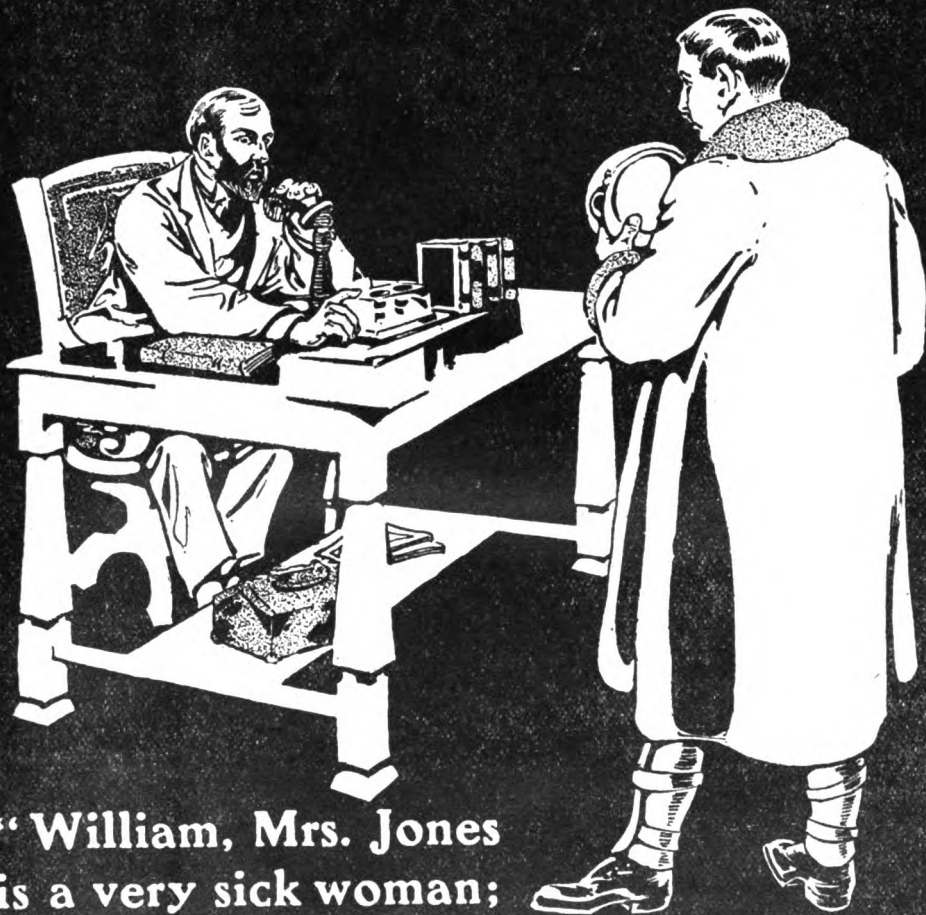
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Elixir Fraxinam Compound.

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THERAPEUTIC INDICATIONS:—Dysmenorrhoea, functional amenorrhoea, menorrhagia, ovaritis, ovarian neuralgia, catarrhal endometritis and salpingitis, leucorrhoea, threatened abortion, pregnancy and any painful conditions of the genital tract amenable to drugs, or any condition showing lack of tone in these organs.

DOSE:—One to three teaspoonfuls as often as indicated. There are no poisonous drugs in this elixir hence the physician need not hesitate to push it until relief is obtained. It may be given pure or in a small quantity of water preferably hot, if a rapid action is desired. One teaspoonful is usually sufficient for a dose.

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DOSE:—ADULTS— $\overline{3i}$ – $\overline{3ii}$ t. i. d. To be given before meals in cases of excessive acidity of the stomach from any cause, and after meals when there is a deficiency or absence of acid secretion.

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This Elixir contains the digestive ferments found in the normal stomach and small intestines in physiological proportion. They are blended with stomachic aromatics, constituents of lecithin and vegetable ferments so as to produce a rich, clear, palatable, antiseptic and powerful fluid, capable of digesting all foods and having a *tonic action upon the cells of the mucous membranes.*

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DOSE TO ADULTS:— $\overline{3\frac{1}{2}}$ as often as indicated. It is seldom necessary to give more than one teaspoonful at a dose and less will do in many cases.

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ACTIONS: Sedative, antispasmodic, mild expectorant, stimulant of nutrition.

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It promptly alleviates and *cures* coughs.

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It is *palatable*.

It is ready for immediate assimilation, *being digested*.

It is very *nutritious*.

It contains no cane sugar, glycerine, glucose, saccharine or narcotics.

It forms a *tasteless* chemical combination with iodine or the iodides without detracting from their therapeutic value.

It is an excellent *menstruum* for ammonium, chlorid, terpine hydrate, potassium iodide, and all other suitable respiratory drugs *excepting strongly alkaline salts*.

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Dispensed on physicians' prescriptions only.

INDICATIONS:—Local application in chronic ulcers, itching, chafing, ivy poisoning, exanthematous fevers, *eczemas*, and other skin diseases, hemorrhoids, balanitis, vaginitis, etc., etc.

DIRECTIONS:—The ointment should be smeared in a thin layer over a soft linen cloth which should then be placed on the affected part. If this is not practicable, smear it directly upon the seat of trouble, first cleansing the part. In *eczemas* and similar affections, scales and crusts should be softened with olive oil and removed before the ointment is applied. Dressings should be changed at least once in twenty-four hours in ordinary cases and the diseased area should be thoroughly cleansed before again applying the ointment. On a tampon it may be used in the vagina, rectum or nasal cavities.

Unguentum Pini Comp. (A. M. S. Co.) has been thoroughly tested clinically, and found to be remarkably efficient as a local application in diseases and injuries of the epidermis and mucous membranes. It is penetrating, stimulating, antiseptic, astringent, antiphlogistic, and has superior healing powers, pleasant odor and elegant appearance which makes it agreeable to patients in every way.

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The superior excellence of therapeutic efficiency, pharmaceutical elegance and palatability is absolutely unapproachable.

DOSE 1 to 2 teaspoonfuls as directed by the physician. Dose should be governed by the amount of Sodium Salicylate desired.

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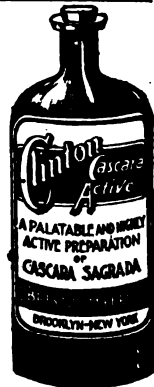
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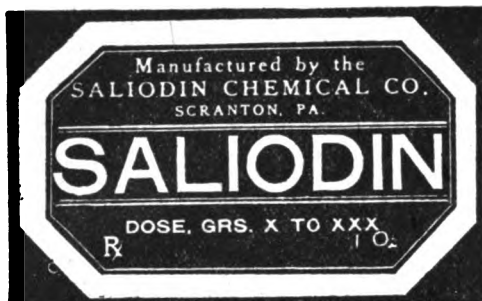
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Iodine, (Iodate) Equivalent to Iodide Potass	Gr. XV
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Aconite	Tr. Aconite R. Gtn. IV
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Colchicum	Tr. Colchicum R. Gtn. XV
Capsicum	Tr. Capsicum Gtn. II
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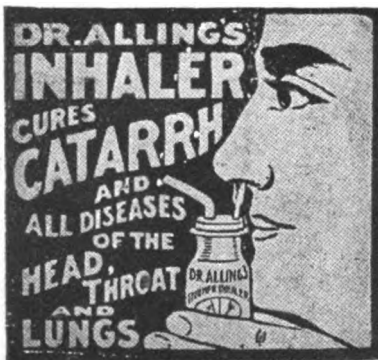
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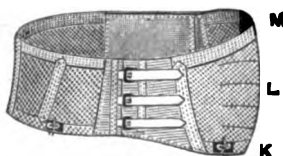
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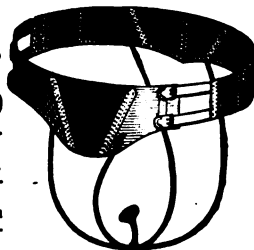
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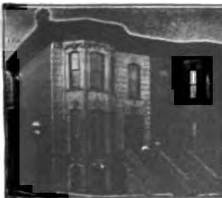
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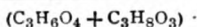
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